JOURNAL

OF THE

CEYLON BRANCH

OF THE

ROYAL ASIATIC SOCIETY.

VOLUME XII.—1891-1892.

EDITED BY THE HONORARY SECRETARY.

BRITISH MUSEUM NATURAL HISTORY

The design of the Society is to institute and promote inquiries into the History, Religions, Languages, Literature, Arts, and Social Condition of the present and former Inhabitants of the Island, with its Geology and Mineralogy, its Climate and Meteorology, its Botany and Zoology.

COLOMBO:

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1893.

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NOTE.

THE present Number of the Journal (No. 42, 1891), commencing Volume XII., is the first issued in accordance with the Resolution of Council dated May 13, 1891, upon a joint report made by the Hon. Treasurer and Hon. Secretaries suggesting means towards the improvement of the form of the Journal itself, and for expediting its issue.

It is hoped that by thus bringing together Proceedings of Meetings, Papers read, and discussions thereon, the whole work done during each year may be presented to Members shortly after its close, putting an end to the delay—perhaps unavoidable—which has generally occurred under the old system.

H. C. P. BELL,
Hon. Secretary.

March, 1892.

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THE ROYAL ASIATIC SOCIETY,

CEYLON BRANCH.

General Meeting.*

Colombo Museum, December 20, 1890.

Present:

His Excellency Sir Arthur E. Havelock, K.C.M.G., Governor, in the Chair.

Hon. M. C. Abdul Rahiman, M.L.C.
Mr. T. Berwick, *Vice-President.*
Mr. A. E. Brown.
Mr. C. Drieberg, B.A., F.H.A.S.
Mr. A. M. Ferguson, C.M.G.
Mr. A. M. Ferguson, junior, M.R.A.S.
Dr. S. Fernando, M.B.C.M.
Mr. C. M, Fernando, B.A., LL.B.
Dr. H. M. Fernando, B.SC.
Mr. P. Freüdenberg.
Mr. W. T. Pearce.
Mr. Edward F. Perera.
Dr. Lisboa Pinto, F.E.A., L.M.S.
Tudor Rajapaksa, Mudaliyár.
Hon. P. Rámanáthan, C.M.G., M.L.C.
Mr. F. C. Roles, M.I.J.
Mr. W. Arthur de Silva.
Mr. H. van Cuylenberg, M.R.A.S.
Dr. W. G. van Dort.
Mr. G. Wall, F.L.S., F.R.A.S., *Vice-President.*
Mr. D. M. de Z. Wickremasinghe, M.L.A.U.K.

Mr. F. H. M. Corbet, M.R.A.S., Honorary Secretary.

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* Though this Meeting was held in 1890, it has been decided to print its Proceedings in the Journal for 1891, so as to include the third and fourth Papers of the series on "A History of the Ancient Industries of Ceylon" in the same Number of the Journal.

Visitors:—Mesdames A. M. Ferguson, junior, W. T. Pearce, R. D. Ormsby, C. Drieberg, A. E. Brown, P. D. Warren, and Miss Vincent; Messrs. R. D. Ormsby, P. D. Warren, Gerald Browne, P.S., T. A. Wylie, A. Warren, E. H. Joseph, C E. H. Corea, C. Gray, L. van Dort, G. E. Prins, E. Corea, J. van Langenberg, Walter Pereira, Gerard A. Joseph, Dr. J. B. Spence, and several others.

1. The Minutes having been read and confirmed, the Honorary Secretary announced that at a recent Meeting of the Council the following gentlemen had been elected Members of the Society, viz.:—Messrs. Felix Reginald Dias, B.A., LL.B.; Francis Crosbie Roles, M.I.J.; Joseph Saunders Addenbrooke, A.R.I.B.A.; George Duppa Miller; Kasim Lebbe Marikar Abdul Kerim, Mudaliyár of the Gate; William Abraham Ratnayaka; and Percy Edward Radley.

2. The Honorary Secretary stated that he had received a letter from the President of the Society, the Lord Bishop of Colombo, expressing his Lordship's regret at being unable to attend the Meeting.

3. The Chairman said that he had great pleasure in calling upon their venerable Vice-President to read the Paper which he had compiled for the Society; and in doing so His Excellency was sure that his expression of pleasure at seeing Mr. Wall once more among them in renewed health would be cordially endorsed by all present. With these words he would ask Mr. Wall to be so kind as to read the Paper he had prepared as the third of the series on—

A HISTORY OF THE ANCIENT INDUSTRIES OF CEYLON.

By GEORGE WALL, Esq., F.L.S., &c., *Vice-President.*

(*Third Paper.*)

IN the first place, I have to apologise for the long delay that has occurred in the reading of this Third Paper. On my own behalf I must plead that it has been unavoidable, as my time has been fully absorbed in the interval by a duty which was not contemplated when these Papers were commenced two years ago.

The First Paper, it may be remembered, treated of the general principles on which the creation and accumulation of wealth depend, and on the effects produced by the manner

of its disposal. Some special circumstances bearing upon these subjects, which are peculiar to this Island, were also specified for their influence on the industries of the people.

The way would then have been clear for the treatment of the ancient industries of the Island, the special subject of these Papers, but for a statement made by so high an authority as that of Sir J. Emerson Tennent that on the arrival of Wijayo, 543 B.C., when the authentic history of Ceylon commences, "agriculture was unknown here, and that grain, if grown at all, was not systematically cultivated." "The inhabitants," he says, "appear to have subsisted then, and for some centuries afterwards, on fruits, honey, and the products of the chase." If this were true, industry, in the common acceptation of the term, was still unknown.

It became necessary, therefore, to show that at the time of Wijayo's invasion the people of Ceylon had settled forms of government, courts, cities, a grammatical language, and other institutions, indicative of a certain measure of civilisation such as usually denotes the existence of a national industry.

The history, from which we derive all the information we possess, respecting the period in question, was written by priests, whose main object was to record the origin and progress of their religion in the Island. All else is recorded only to exhibit this central object of their graphic narrative, or to magnify the virtues and achievements of particular heroes. We search in vain, therefore, in its pages for any direct account of the industries or the condition of the people. Nevertheless, the events recorded, and the accessories of the picture the historians have drawn, afford material sufficient to establish, by logical inference, the facts stated in the Second Paper; and the history itself, according to Turnour, "is authenticated by the concurrence of every evidence which can contribute to verify the annals of any country."

Moreover, the argument in proof of the facts as described in my last Paper does not depend upon the verbal accuracy of the details of the history, nor is its force impaired by some obvious Orientalisms of the narrative, but rest upon undisputed facts. In short, if Wijayo really landed in Ceylon and obtained supreme rule over it, or a considerable part of it; if his ministers dispersed and established his dominion over several distant parts of the Island; if Panduwo, king of Madura, a few years later sent his daughter to renowned Sihala to be Wijayo's bride, accompanied by noble Páṇḍiyan ladies and an equipage befitting a royal personage; if, in fact, the whole history be not a myth, —the conclusions therefrom in the Second Paper are unquestionable, notwithstanding some possible numerical exaggerations and flights of Oriental fancy indulged in by the historians to embellish their work. The large number and advanced condition of the people stand attested by the *nature* of their institutions themselves, even more than by any details or colouring of their number and magnitude affected by the historians.

For the present purpose the period to which the argument relates is comprised within the first century and a half after Wijayo's rule. Whatever works of national importance were done during that period must have been effected by means of resources pre-existing, as that sovereign and his seven hundred followers could not have created new national resources. Their utmost efforts could only have been exerted to utilise the means they found ready to their hand, and to employ the people who were in occupation of the country.

It follows that any hypothesis which may be tested to account for the wealth of the Island, and the sources from which it was derived, must be consistent with the existence of the courts, institutions, language, and forms of government that have been proved to have existed then.

History and experience would point to agriculture as the most probable origin of national wealth, and would naturally be the first hypothesis to be subjected to the test of research;

but as Tennent has pronounced positively against that theory, it seems necessary to try other possibilities, and to consider whether, for example, the gems, pearls, and mineral resources of the Island would suffice to account for the state of the country and the conditions that have been proved to exist.

Referring to all that is known of tribes of people now living, without agriculture, on fruits, honey, and the products of the chase in Australia, California, Nevada, and the Cape, where mineral wealth once abounded and might have been collected on or near the surface, they all—Red Indians, Bushmen, and Hottentots alike—neglected the precious minerals and wandered in a perpetual state of warfare and intertribal strife for the possession of the hunting grounds that supplied the necessaries of life. The treasures they value are scalps and skulls, their dress skins, feathers, and war paint, and their dwellings are caves and wigwams bearing no resemblance to anything recorded of the people of Ceylon or their mode of life. In vain do we search for a parallel, or even for any approach, on the part of nomadic tribes who eschew agriculture to any such conditions as those postulated of the Yakkhos at the time when Wijayo, enamoured of the Yakkhini princess Kuvéni, made her his wife, listened to her treacherous counsel, and established his rule on the ruin of that of two sovereigns who had assembled their courtiers for the friendly purpose of celebrating a wedding festival in honour of the respective scions of their houses.

According to the principles specified in the first of these Papers, wealth can only be acquired by means of labour, for even the countries most richly endowed by nature yield up their stores of natural wealth only in response to toil. The gold fever in Australia has already been cited to show that gold, even when collected on or near the surface of the ground, gave but a moderate return, on an average, to those who crowded to the diggings. If, therefore, it were assumed that gems and precious metals had been as plentiful and as accessible in Ceylon as was gold in Australia, it could not have

enriched the people beyond the extent of the narrow margin of time and labour that could have been spared from the pursuit of the chase and the other precarious sources of food supply. Food, shelter, and some clothing must first have been provided before any labour could have been employed for other purposes. It is obvious, however, that a large population, such as must have been necessary to create the conditions prescribed, could not have been maintained by wild fruits and the products of the chase in any country even if their whole time were devoted to the pursuit. It follows, therefore, that if the people were engaged in mining, they must have derived their food from foreign sources, and the only available surplus would be that between the value of their minerals and that of their imported food. The necessary interchange of these commodities, moreover, implies the existence of regular commercial relations and a free intercourse with other countries, of which no evidence exists in history, and which could not have existed without its being betrayed in the course of the historic record. The possession of mineral wealth, in any such profusion as would have sufficed to produce the conditions which have to be accounted for, could necessarily have afforded a kind of booty that would have brought to the shores of Ceylon other invasions than those that history records. These all had for their object the possession of power, and occasionally, in times subsequent to that now in question, the plunder of the temples, on which precious treasures were lavished in token of the religious zeal of the monarchs who had so embellished them.

The only positive arguments against the existence of regular agriculture with which I have met are two: first, that Kuvéni entertained Wijayo and his retinue with rice from wrecked ships; and secondly, that amongst the splendid presents sent by Dhammáṣoka to Dévanampiyatissa were one hundred and sixty loads of hill paddy—the other articles: a chowrie, diadem, sword of state, golden parasol, slippers a golden vase (anointing), sandalwood, a crore of cloths.

(asbestos), a right-hand chank of Ganges water, a royal virgin, golden vessels, and costly drugs, &c.

Regarding the condition of the country, as postulated, and the very considerable population necessary to the attainment and maintenance of such a condition, the idea that the country depended upon such a precarious and slender resource as that of casual wrecks appears to be scarcely worth arguing. At any rate, it is not an argument which could hold ground without some stronger evidence and support than that of a passing mention, under circumstances that lend it no collateral force beyond the brief statement itself.

The second argument is equally inconclusive. The idea of this comparatively paltry contribution to a country supposed to be dependent upon foreign supplies of rice, would seem, as an item in an otherwise sumptuous royal gift, as a very insulting suggestion. Moreover, the fact that the present was of paddy, and not of rice, indicates that it was intended for seed, especially as it is described as *hill* paddy—a special product which was probably unknown in Ceylon, or a particularly valuable variety such as it would become a king to send to a neighbouring monarch. Whatever may have been the object of this particular gift, it cannot be reasonally urged, as valid evidence, that the country depended for its food supply, or for rice in particular, upon foreign sources, or that it had no regular and systematic cultivation of grain. Even if collateral circumstances were not, as they assuredly are, quite inconsistent with the dependence of the people on foreign supplies of food, these two trivial incidents, casually mentioned in the historic narrative, would not be regarded as possessing any inherent force. Considering that they are not only quite unsupported, but are in themselves out of keeping with the tenour of the narrative, they may be dismissed.

Before concluding the argument for the incompatibility of Sir Emerson Tennent's theory, in any form, with the proved facts of the situation when Wijayo ruled the realm, it may be mentioned that the annual value of the gems

raised in Ceylon is estimated on his authority as not exceeding £10,000; and it is a suggestive fact that the province that is richest in this source of wealth is one of the poorest in the Island. Nor is this surprising when it is considered that the soil that yields these precious treasures gives as it were but one harvest, and that often at great cost, whereas the husbandman reaps one or more crops every year from the same field until its cumulative yield of grain infinitely outweighs in value the one precarious crop of gems that may or may not reward the gemmer's toil.

All that has been said of gems and precious metals as a source of wealth applies equally to pearls. These all, however valuable as adjuncts, fail to fulfil the conditions required of primary resources capable of superseding agriculture as the main spring of national wealth.

Having now shown that other resources, independently of systematic agriculture, could not have sufficed for the attainment or maintenance of the order of things that prevailed when Wijayo ruled in Ceylon, it remains to show that in that agency, which Tennent denied, the whole may be easily and naturally accounted for.

In the first of these Papers it was demonstrated that wealth is the surplus product of labour over and above what is necessary to provide for the labourers the necessaries of life, food, shelter, and raiment. The surplus, represented by the conditions proved in the Second Paper, must therefore have arisen after providing for the wants, not only of the labourers themselves, but also for those of a host of priests and monks and the retinue of the court, besides supplying all the numerous services requisite for the maintenance of a regal state.

The foregoing argument of the present Paper seems to leave no doubt that the ancient industry, by means of which the advanced condition of the Island had been attained, was agriculture, seeing that no alternative means is tenable. On the other hand, on this hypothesis all the results for which it is necessary to account flow naturally in obedience to laws

that are familiar in history, and have produced like results, wherever the cultivation of the soil has been pursued intelligently and under favourable natural conditions.

It may be suggested, at this stage of the argument, that Tennent's conclusion, which has had to be rejected, however reluctantly, may have been due to his regarding *Yakkhá* as a synonym for *Veddá*, whose mode of life he describes. This is manifestly a mistake, as has already been pointed out. However his conclusion may have originated, it is worthy of note that the glory of a subsequent period of the Siṇhalese history is referred by him to the splendid system of agriculture which was then engaging the attention of the most renowned of their kings, and was giving rise to some of the grandest works of irrigation that have ever been accomplished by man. The task undertaken in this Paper is to show that those great achievements are but a higher development of the same industry which had, even in Wijayo's time, already made Sihala renowned, and caused it to be selected by Gautama Buddha as a specially suitable field for the introduction of his religion.

The food of the people, rich and poor alike, is continually specified in the history of the period in question, both in reference to the rations served out by the people and the State to the priests and monks, and also as the staple food of all classes, from the king on his throne to the labourer in the field. This article of food, rice, therefore was the particular product to which the agriculture of the period was devoted. This it was that yielded the revenues of the State and gave to the country the institutions and advanced condition that is reflected in the works of which some ruins yet remain to attest the truth of the historic record. Continually as the items of rice, rice cakes, rice broth, milk rice, recur, it is remarkable that no other grain is mentioned, nor other food, except butter, curds, sugar, and honey. Rice in a golden dish was served to the king, and the same viand, in a less sumptuous form, was also the food of the priests and the people.

A large population such as is essential to account for the conditions described was an insuperable difficulty, with the hypothesis of the wild mode of life ascribed to the people by Tennent, but is an essential factor of an agricultural system adequate to fulfil those conditions. Much of their efficiency as a wealth-creating people would necessarily depend upon their character and disposition, their industry and submission to authority.

Fortunately, the data afforded by the narrative of the historians leave no doubt on this important subject. That they were a peaceful people is indicated by the facility with which Wijayo established his rule over them. History gives special prominence to all warlike demonstrations such as occurred in later times, but records no opposition to Wijayo's assumption of power. His massacre of the assembled courtiers at the famous wedding festival is the only occasion on which he appears to have had recourse to arms, and that was no battle, but a surprise in which his victims fell without formal resistance.

The dispersion of his principal ministers into various distant parts of the country, where they established their courts and the supreme authority of their chief, is a conclusive proof of the pacific disposition of the people; for these officers would not have ventured to separate from Wijayo and each other if the inhabitants had not manifested a ready acquiescence in the new order of things. Such a dispersion of the small party would have been practicable only amongst a perfectly peaceful population.

Further evidence to the same effect is afforded by the passage through the country of the *cortège* that accompanied Panduwo's daughter and her retinue of noble ladies and their attendants, bearing valuable presents. Such a party, unaccompanied, as they appear to have been, by any armed force, would have afforded a rare opportunity for plunder to a wild, nomadic tribe pursuing the mode of life ascribed to them by Tennent. The fact, moreover, that Panduwo, who described Ceylon as renowned, ventured to despatch the

bridal party in the manner described, shows that he knew the inhabitants to be of a peaceful disposition.

In this connection it is worthy of note that Gautama Buddha, who had previously visited the Island, and must therefore have had some knowledge of the disposition of the Yakkhus, chose it as a specially favourable sphere for the reception and propagation of his religion. This choice affords indirect additional evidence that they were not wild, wandering tribes, but a settled people engaged in regular pursuits.

The foregoing considerations appear to establish the peaceful character of the people, and that, in turn, affords strong evidence that they must also have been industrious, for it is no new attribute of him who has always been the employer of the idle to find them mischievous occupation.

It is easy to imagine that such a people as we have been describing would thrive apace under the influence of a settled supreme government as compared with that of separate petty chiefs. It is not surprising, therefore, that under the mild and righteous rule established by Wijayo and his ministers, the country made rapid progress; that the national industry flourished; that the principal cities were endowed with civilised institutions; that public edifices rose in quick succession; and that material progress advanced in the manner the narrative implies.

The difficulty of identifying some of the localities where Wijayo's ministers settled leaves us in doubt as to the exact extent of country over which their more direct influence prevailed. There is no doubt, however, that the part most thickly peopled, and that over which they exercised the most direct influence, was the rich tract in the north and north-central portions of the Island. Elsewhere, though the new dynasty may have been formally acknowledged, it does not appear that effective rule over the whole Island was concentrated in one supreme head until a somewhat later date. Till then, therefore, the entire resources of the Island could not have been brought to bear upon any great

national works, nor could the new religion be formally inaugurated as that of the whole Island.

It follows that the national industry—the cultivation of rice—must have been pursued up to the time we are reviewing by comparatively primitive methods. The essential feature of the enterprise, even in its simplest form, was that of collecting-tanks, which were indispensable, especially in the places above specified, where the sparse rainfall required always to be husbanded with the greatest care for the use of the cultivators. These necessary works must have had small beginnings, such as each village could compass for itself, and have gradually assumed larger proportions, requiring the combined forces of several villages or of a district; they must also have been collateral in number and in the area over which they were spread with the growth of the cultivation itself, and with the increase of the population engaged in it. Each of these works, however simple, having to serve a number of people, the dependence of each community upon a common supply of the primary necessity of their living would be likely to beget an accommodating habit and a spirit of union amongst them. This circumstance may probably have fostered, if it did not actually engender, the pacific disposition that characterised the people, and was so essential to the success of their labours and the progress of the country.

Reading the pages of the national history of that period—the smooth progress of events; the ready acceptance of the new rule; the facility with which the Buddhist religion obtained the homage of the whole population;—all seem rather like a fiction than the history of a revolution, for such, in truth, the new regime really was. The only parallel within our knowledge is that of the Tartars in China, whose dynasty, though first established by force against a show of resistance, was quietly accepted by the Chinese people.

It will be observed that the political situation, as we have endeavoured to show it, though forming an incidental feature of the history that is not even once specially mentioned, is

nevertheless of primary importance to our purpose, inasmuch as it enables the reader to perceive how the wealth of the country had been created, and to account for its rapid growth and development under the new conditons specified.

The introduction of the new religion, with its captivating ceremonial observances and festivities, and the progress it made, not only without opposition, but apparently also with even more than the characteristic acquiescence the people had shown in the new political order, afford conclusive proof of the settled nature and successful pursuit of the national industry. For it cannot be denied that the whole fabric, both religious and political, depended for its existence upon the success of the national enterprise that furnished the crowd of willing worshippers, the host of priests and monks, and the regal state that gave *eclât* to the new order.

Hence the encouragement of agriculture naturally became a primary object of the attention of the early monarchs of the new dynasty. Accordingly the priestly narrative mentions the construction of several tanks amongst the achievements of their heroes. These works were evidently made by the resources of the State, in token of the sympathy of the new rulers with the pursuits of the people, in which they naturally perceived lay the sources of their revenue and the interest of the country. They thus consolidated their power and enlarged their influence over the people by the encouragement of the national industry.

It may here be mentioned, that the manner in which the historians record these works plainly indicates that they were not new in character, not imported from abroad, but of a nature similar to those the people had constructed for themselves, and which were in universal use. It has already been shown that the nature of the national irrigation works must originally have been of the simplest character and construction, and that, at the period under review, they could not have been developed beyond the stage at which they were compassable by the efforts of the villagers individually, or by small combinations, seeing that as yet the

resources of the State could not have been concentrated upon such larger undertakings as those of a later date. That the first royal structures were of the same character as those previously in use, is shown by the terms in which they are recorded. The historians, in describing the achievements of their heroes, were profuse in their ascriptions of praise, and they enlarged in inflated terms on the grandeur of the works accomplished by the kings. They described, not without manifest exaggeration, the magnitude and splendour of the edifices erected and the deeds performed by the rulers. They would not therefore have passed over, with a bare mention, a fact so important as the construction of a tank, if it had been of a novel character, whether for the grandeur of its dimensions or the novelty of its construction. It may therefore be safely assumed that the tanks first mentioned in the history, as made by the early kings, differed in no respect, that was worthy of record, from those common throughout the country. The fact that in a single reign, and that not a long one, a dozen or more of these structures are recorded, proves plainly that they were of the simple type of those pre-existing ones by which the cultivation had always been carried on. Nevertheless, though the irrigation works were of that simple character, the extent to which the national industry had been carried, and the vast number of people who were engaged in it, are amply indicated by the state of the country, the thousands of priests and people that crowded the cities, the pleasure gardens, the royal retinues, and the public buildings that were supported by its means.

These exponents of the surplus wealth of the Island, after providing for the food and requirements of the labourers, show that the national industry to which they all owed their existence must have attained great development, and have embodied the labour of a vast number of people. Yet up to this time the whole system must have depended upon those simple works which the people carried out themselves, each village or small district by its own resources.

The gigantic works which began to appear shortly afterwards could not in fact have been constructed, except by means of the combined national resources wielded by monarchs whose rule was fully established over the entire Island. Nor indeed could works of the gigantic proportions of those whose ruins have excited the astonishment and admiration of all beholders, have been undertaken until means adequate to such vast undertakings had been accumulated. It follows that these great works were the offspring of those simple ones by which alone the means of constructing them could have been provided, and on which, even to this day, the practical working of the paddy lands in the drier provinces depends.

The undeniable fact that the wealth necessary to enable the kings of old to construct the first of such colossal works as those whose ruins have been lately partially restored must have been acquired by means of the smaller tanks, suggests an inquiry as to the need for the larger and more costly works; and this again leads to a consideration of the different nature and functions of the two classes of works—the former, collecting, storing, and husbanding the local rainfall; while the latter conveyed from afar the rainfall of the mountain regions. The necessity for the former is primary, and in every case indispensable, while the function of the latter is supplementary and secondary. By these the national industry was consolidated and relieved to a great extent from the uncertainty of local rainfall and effects of season.

It may be fairly assumed that the general character of the climate of those parts of the country where these great works were constructed is much the same now as it was in Wijayo's time, and that therefore particular parts would in certain seasons fall short of their accustomed rainfall. In that case the dense populations of those spots would suffer severely in proportion to the number of people that were dependent upon the normal supply of grain. Such deficiency of the usual harvests would tell heavily on the national granaries.

Hence the idea of supplementing the local supply of water, by draughts from the perennial streams from the interior, would naturally follow, and the accumulated wealth (whether of labour or its equivalent in value is immaterial) would be freely devoted to the Herculean task of bringing in supplementary supplies of water for the purpose of consolidating the national enterprise and *insuring* more regular harvests.

It will form the object of a future chapter to describe these great works and their functions more particularly than could be conveniently done in the present Paper. It may be mentioned, however, that the water which the greatest of these works could supply would not suffice for the cultivation of any such area of land as would justify their prodigious cost. This fact alone suggests that their functions were supplementary, and that they were not intended to supply a given area with its requisite quantity, but to supplement the deficiencies over a far larger area. The design of the greater number of them at least, so far as it has been yet discovered, seems to show that they were intended to supplement deficiencies of the supply of the primary working tanks that had long pre-existed, and had even, when unaided by their supplemental contributions, raised the country to a condition of wealth such as rendered the construction of these larger works possible, and supplied the means of executing them.

The Hon. P. RÁMANÁTHAN said that in the valuable Paper which Mr. Wall had read the state of agriculture in Ceylon at the time of Wijayo's landing had been ably considered upon what might be called inferential arguments based on the political situation of the country. Mr. Wall's conclusion was that in the sixth century before Christ agriculture was in a highly advanced condition. Sir J. Emerson Tennent thought differently, on the strength of explicit statements found recorded in the *Maháwaṇsa.*

Neither Mr. Wall nor Tennent had referred to the *Rámáyana*, which described Ceylon as it was under the Rakshasa King Rávaṇa, at a period long anterior to the landing of Wijayo. Like the Homeric poems, the *Rámáyana*

was supposed by some European scholars to contain nothing but romance and myth, but that opinion could no longer be maintained. The *Iliad* and the *Odyssey*, the *Rámáyana* and the *Maha Bhárata*, must be admitted to describe largely events which had actually occurred. Ráma, the hero of the *Rámáyana*, came to Laṅká, which is Ceylon, in order to punish Rávaṇa for the rape of Síta, and the description given of the Island in the *Rámáyana* proved the existence of a very advanced type of civilisation. Agriculture and commerce and various arts and sciences were in a highly flourishing condition. The question was how far anterior was Rávaṇa's age to Wijayo's? The belief among Tamil and other Hindu scholars was that Ráma and Rávaṇa lived several thousand years before Christ, but European *savants* placed their era in the thirteenth century before Christ.

Admitting this computation to be the more acceptable to the Members of the Society, there was a period of seven centuries between Rávaṇa and Wijayo. It being recorded in the *Rámáyana* that the great army of Ráma had demolished almost every vestige of civilisation in the Island, we are bound to conclude that, though agriculture had been in a very flourishing condition under Rávaṇa, yet Wijayo found the country in a truly primitive state, as recorded in the *Mahávaṇsa*. There was no room for inferential argument when it was explicitly stated in that historical work that "Laṅká was not habitable for men," and that the rice which the Yakkhini distributed among Wijayo's followers was rice which she had gathered "from the wrecked ship of mariners who had fallen a prey to her."

The Island was then in the possession of the Yakkos, not the ferocious yet luxurious Rákshasas whom Ráma destroyed. The Yakkos were a less turbulent and less advanced community, and did not deserve the name of men because they devoured men. If the country was as civilised as Mr. Wall contended, the question arose, why the Páṇdiyan king, with all the paraphernalia of a complete civilisation, including large armies and ships of war, on the adjoining coast of India, within a few hours of sail, did not invade Ceylon? If he did not it must have been either because the Yakkos had the necessary appliances for resisting invasion, or were in the occupation of a country which then afforded no attractions to a conqueror by reason of its natural resources or the disposition of its inhabitants. The latter alternative is inadmissible, because the Yakkos were easily conquered by a handful of Wijayo's followers. It was quite worth while on the part of a lawless exile like Wijayo to establish himself in a *mlechcha* country as Ceylon then was, but the

Páṇḍiyan king thought it wise to refrain from wasting his energies on the redemption of a people who were given to black magic and cannibalism. His Tamil subjects could not possibly coalesce with such a community, even if he conquered them.

Under these circumstances Mr. Rámanáthan contended that the balance of evidence was with the *Maháwaṃsa* and Sir J. Emerson Tennent on the issue whether agriculture was pursued or not by the Yakkos at the time of Wijayo's landing in Ceylon. Wijayo might have received his supplies of rice from the traders of the Páṇḍiyan kingdom just as easily as he secured brides for himself and his courtiers from that king.

Mr. A. M. FERGUSON, C.M.G., pointed out that it was not merely Sir J. Emerson Tennent but the *Maháwaṃsa* which Mr. Wall impeached in disputing the inference to be drawn from the statement that Kuvéni was compelled to resort to rice from wrecked vessels wherewith to feed Wijayo and his followers. It seemed incredible, too, that if the aborigines were so numerous and so advanced as Mr. Wall contended, they should have been so easily conquered by a party of 700 invaders. As regarded the accounts given respecting wealth in precious stones and pearls, they all knew what Oriental exaggeration was in such matters.

His (Mr. Ferguson's) inclination was in favour of Sir J. Emerson Tennent's views, and those of the writers who believed that Dravidian influence could be traced in the irrigation works and other monuments of an ancient civilisation in Ceylon. It seemed probable that from the Páṇḍiyan kingdom, whence successive monarchs of Ceylon obtained their wives, they might also obtain the assistance of men skilled in hydraulic engineering. The one qualification of his belief in this theory was the high opinion entertained of the engineering and architectural skill of the Siṃhalese by a gentleman of so much learning and ability as Mr. Henry Parker. On the other hand, Fergusson, the great writer on Indian Architecture, had pointed out that the design for the Brazen Palace at Anurádhapura, said to be of celestial origin—nine superimposed circular stories and all of similar size—was simply impossible. He (Mr. Ferguson) would be glad if any one of the Siṃhalese gentlemen present would break a lance with him on the subject. It was certainly now the opinion of Oriental scholars that Dravidian civilisation had made great advances prior to the flow of the Áryan wave from Central Asia into Northern India. The Dravidians, it was now known, possessed what was supposed to be a peculiarly Áryan institution, the village community.

On the other hand, the fact that the names of the leading mountains and rivers in Ceylon were Sanskrit—except where the Tamils had permanently established their power—seemed to prove that the people whom Wijayo and his followers conquered were akin to the conquerors in blood and language; and, if so, it was surely a very curious phenomenon that such a race should be found in such a position a thousand miles away from their Aryan brethren in Northern India. They must not forget, however, that with all the value of the *Maháwaṉsa*, its early chapters were (as Bishop Copleston had pointed out, when he and Mr. Wall had previously discussed this question) largely mythical, and that the historic period did not commence for some centuries after the era of Wijayo. He (Mr. Ferguson) had been astonished at two things: Mr. Wall's mention of Gautama Buddha's visits to Ceylon, as if there was not full evidence that Gautama never was in the Island; and that Mr. Rámanáthan should have based what he deemed the authentic history of Ceylon so far back as 1300 B.C., on the myths of the *Rámáyana*, seeing it was certain that the Indian prince Ráma had never set foot in Ceylon. This he felt safe in asserting, although Mr. Rámanáthan had Forbes on his side as well as such names of places in Ceylon as Sítávaka.

Mr. C. E. H. Corea said that if Mr. Rámanáthan looked closely into the matter he would find that the king of Páṇḍiya referred to by him was not a Tamil king. The balance of evidence of which the honourable gentleman spoke pointed to the fact that the Páṇḍiyan country at the time of Wijayo was an Áryan principality, governed by an Áryan dynasty. And further, there was every historical evidence to show that Madura itself, its capital, had been founded by an Áryan prince. If then the Páṇḍiyan throne was occupied by an Áryan prince, it was but rational to conclude that he had Áryan subjects. And more especially as the *Maháwaṉsa* distinctly says that it was from the royal family and *the nobility* that Wijayo's colony was supplemented.

Nothing was clearer than that if South India had any claims to the credit of the civilisation of the Wijayan times, such claim belonged not to the Dravidian, but to the Áryans who had settled there, and who were of the same blood and family as Wijayo's followers.

Mr. Rámanáthan wondered why the Páṇḍiyan king did not invade Ceylon. Sufficient reason was to be found in the fact of the comity which existed between the Pâṇḍiyan kingdom and Wijayo's fatherland, and also the probable kinship of the two princes.

As regarded the engineering skill of the Siṉhalese, which Mr. Ferguson challenged one of that people to defend, they

had admirable monuments of it in the shape of ruins and in the irrigation works spread all over the country. Though they had Mr. Ferguson's word for discrediting everything that the *Maháwaṇsa* records, and even if, as Mr. Ferguson seemed to think, the Brazen Palace of Anurádhapura was a myth of Oriental fancy, still they had other edifices, though in ruins indeed, so that they could not but be reconciled to the idea that these edifices had existed, as the *Maháwaṇsa* says they did, at the period to which Mr. Ferguson referred. These ruins of so many palaces were sufficient evidence in themselves that the Siṇhalese at the time they were built excelled in engineering skill.

In conclusion, Mr. Corea said that it was his duty to thank Mr. Wall, inasmuch as he knew that he had undertaken the compilation of his Paper as an apology for a people who had not many friends, and who, the speaker could not help saying, had been much maligned. The Siṇhalese owed Mr. Wall their best thanks and a deep debt of gratitude.

The Hon. Mr. RÁMANÁTHAN said that Mr. Ferguson had perpetrated a joke which had been misunderstood by Mr. Corea. It was not right that Members should be taken to espouse sides simply because they belonged to certain nationalities. For his own part, he forgot for the time that he was a Tamil, and had spoken as one who was dissecting evidence from a disinterested point of view. He was of opinion that the balance of evidence on the subject lay with Tennent.

Mr. WALL answered briefly. He said that the conviction which he had embodied in his Paper was forced upon him by the reading of numerous books, more particularly that of Sir J. Emerson Tennent, who he maintained was a very high authority, as he had the advantage of earlier writers. When he read the account in the *Maháwaṇsa* regarding the dispersion of the ministers who accompanied Wijayo and about their forming courts, the idea at once struck him that there must have been a great many people who had to be supported. The Hon. Mr. Rámanáthan endeavoured to explain, in answer to his query, that the means by which the people obtained rice was through its being imported from the neighbouring continent; but the hon. gentleman had forgotten the fact that imported rice had to be paid for, and that one did not get out of the difficulty that way, for the rice that the people consumed was equal to the purchasing of their rice. It seemed to him impossible that such a state of things as was reported to have transpired at the time of Wijayo's landing could have been brought about by any other means than by the customs of the country and of a very considerable population supported by a local industry.

The materials that Wijayo had to work upon resulted in certain works of which the ruins still remained to show that the account given of them was not an exaggerated account. It was inconceivable to him that they should spring up out of nothing, in view of the fact that the great buildings also bore dates upon them.

The Hon. Mr. RÁMANÁTHAN wished to know what Mr. Wall thought of the stone at Mihintalé, referred to by Turnour, dated 262 B.C., in which was recorded that the custom to be observed in regard to the work (speaking of an irrigation work) should be according to the customs of the Tamils, or words to that effect.

Mr. FERGUSON said that it would have an important bearing on the discussion if the date of the formation of the first great irrigation works could be ascertained.

Mr. WALL said that there were no large works existing during the period covered by his review, but it was subsequent to that period that the Tamils were in actual power. Elála might have been the author of that inscription.*

Mr. BERWICK said that the subject that had been discussed was a very interesting one to every one who studied the conditions and devolopment of ancient industry, and particularly interesting to the people of this country. It seemed to him that Mr. Wall's views derived a considerable degree of probability from the fact that it was only such a comparatively short time ago as twenty-five centuries since Wijayo landed in Ceylon, and therefore it would seem *primâ facie* extraordinary if none of the inhabitants had then the industrial civilisation required for agriculture. Twenty-five centuries must be considered a very short time back in the history of industries seeing the remote geological periods to which our scientists are now, with great plausibility and almost proof, carrying back art industries, let alone food industries and the very Áryan race itself. And it must be remembered that the people with whom Wjjayo came in contact on landing here were probably not the aboriginal forest tribes, but people not only living close to the industrial civilisation of India, but themselves descended from Indian Dravidian settlers who, in all ages we have account of, have streamed over to Ceylon, as the *Rámáyana* illustrates.

A previous speaker expressed himself a good deal astonished at many things, but he (Mr. Berwick) confessed that he was astonished too, and indeed almost shocked at the gentleman's disbelief in, and attempt to sap our faith in,

* The inscription was wrongly assigned by Turnour (Ceylon Almanac, 1834) to "about the year of Buddha 805, A.D. 262," from a mistake regarding the identity of the King Sri Sanga Bo mentioned in the first line. The record belongs to Mahindu III. (997–1013 A.D.).—B., *Hon. Sec.*

the *Rámáyana.* It seemed to him impossible to travel from the north of India to the south without everywhere finding the invasion there spoken of confirmed by story and sculpture, and for his part he believed the epic of the *Rámáyana* to have as substantial a basis in history as the stories of ancient Egypt and ancient Greece.

He agreed with the Siṇhalese gentleman who spoke so thoughtfully and intelligently in his correction of Mr. Rámanáthan. The Páṇḍiyan rulers always claimed to be of the Lunar, if not the Ṡolar race, and therefore to be Áryan in origin.

But he was afraid he was wandering somewhat from the purpose for which he rose. Whatever differences of opinion might exist on the subjects discussed, there could be no difference of opinion as to their obligations to Mr. Wall for the Paper he had read, and he begged to move a cordial vote of thanks to that gentleman for the very interesting and valuable Paper he had given the Society.

Mr. C. M. FERNANDO said he had pleasure in seconding the motion. Mr. Wall's Paper had not only been carefully listened to, but had provoked considerable discussion, and whatever the opinions of those present might be in regard to the subject discussed by Mr. Wall, they, whether Europeans, Siṇhalese, or Dravidians, were all thankful to him for his very interesting Paper.

HIS EXCELLENCY THE GOVERNOR, in congratulating Mr. Wall on the unanimous vote of thanks awarded to him for his Paper, said that he had derived much instruction from the amusing and interesting discussion carried on that night. His Excellency was of opinion that Mr. Wall terminated his Paper in a particularly judicious manner, in that he had left his audience at the threshold of a very interesting and important subject, the history of the great irrigation works, and they looked forward to his Fourth Paper, which he proposed to read to the Society, with the greatest interest and expectation. He was happy to think that it was not a part of his duty to decide the merits of the very interesting question about which there was such divergence of opinion, but he must repeat the fact that he was greatly interested in listening to Mr. Wall's able Paper.

Mr. PHILIP FREUDENBERG thanked His Excellency, in the name of the Society, for his presence, and said that, as the Society depended for its success upon the attitude assumed towards it by the ruler of the Colony, he hoped that His Excellency would continue to take an interest in it and would preside at future Meetings.

Mr. WALL seconded the compliment, and the proceedings terminated.

Council Meeting.

Colombo Library, May 13, 1891.

Present :

Mr. George Wall, F.L.S., F.R.A.S., Vice-President, in the Chair.

Mr. Henry Bois.
Mr. W. H. G. Duncan, Honorary Treasurer.
Mr. S. Green.
Hon. P. Rámanáthan, C.M.G.
Mr. W. P. Ranasiṅha.
Hon. A. de A. Seneviratna, M.L.C.

Mr. F. H. M. Corbet, M.R.A.S., Honorary Secretary.

Business.

1. Read and confirmed Minutes of the Meetings of the Council held on August 5 and December 20, 1890.

2. The Honorary Secretary stated that the Members of the Council who had forfeited their seats under Rule XXX. by reason of least attendance were :—

Dr. H. Trimen,
{ Mr. A. M. Ferguson,
{ Mr. Henry Bois ;

and by reason of seniority—

Dr. J. L. Vanderstraaten,
Mr. Philip Freüdenberg.

He added that Dr. Vanderstraaten had, moreover, tendered his resignation as a Member of the Council. Messrs. Ferguson and Bois being bracketed together, it was resolved that the former should be deemed to have retired by reason of least attendance, and should be nominated for re-election for 1891. Resolved also that Dr. Trimen be nominated for re-election.

3. Moved by Mr. Wall, seconded by Mr. Rámanáthan, and carried, that the Lord Bishop of Colombo be nominated *President* for 1891.

4. Moved by Mr. Rámanáthan, seconded by Mr. Seneviratna, and carried, that Messrs. George Wall, F.L.S., F.R.A.S., and Thomas Berwick, be nominated *Vice-Presidents.*

5. Resolved to nominate the following *Council:*—Mr. H. Bois; Mr. H. H. Cameron; Colonel the Hon. F. C. H. Clarke, R.A., C.M.G.; Mr. A. M. Ferguson, C.M.G.; Mr. S. Green; Mr. J. P. Lewis, C.C.S.; the Hon. T. B. Panabokke, M.L.C.; the Hon. P. Rámanáthan, C.M.G., M.L.C.; Mr. W. P. Ranasiṇha; Mr. E. S. W. Senáthi Raja, M.R.A.S., &c.; the Hon. A. de A. Seneviratna, M.L.C.; Dr. H. Trimen, M.B., F.L.S.

6. Moved by Mr. Rámanáthan, seconded by Mr. Seneviratna, and carried, that Mr. W. H. G. Duncan be nominated *Honorary Treasurer.*

7. It being proposed that Messrs. H. C. P. Bell and F. H. M. Corbet be nominated *Honorary Secretaries*, the latter stated that he could not undertake the duties of Honorary Secretary in 1891, as he was about to leave Ceylon on a visit to Europe, and that he would not ask any one to act for him.

Resolved that Messrs. H. C. P. Bell, C.C.S., and J. P. Lewis, C.C.S., be nominated *Honorary Secretaries*, Mr. Lewis's seat as a Member of the Council not being filled up, pending the Meeting of the Council on May 14.

8. Considered applications received from the following candidates, and resolved that they be elected Ordinary Resident Members of the Society, viz.:—

Messrs. Jeronis William Charles de Soysa; Alfred Joseph Richard de Soysa; Charles Edgar Henry Corea; Walter Pereira, Advocate, Supreme Court; James Walter Seneviratna; Abraham Mendis Gunasekara, Mudaliyár; and Mr. Hugh Fraser.

9. Considered an application from the following candidate, and resolved that he be elected an Ordinary Non-Resident Member of the Society, viz.:—

Pandit Gopi Nath, of Lahore.

10. The Honorary Secretary submitted a Report dated February 19, 1891, which had been circulated, addressed to the Council by the Honorary Treasurer and Honorary Secretaries, embodying their views regarding the best means of expediting the publication of the Papers read before the Society.

CIRCULAR.

Colombo, February 24, 1891.

To the Council of the Asiatic Society of Ceylon and Ceylon Branch of the Royal Asiatic Society.

I HAVE the honour to circulate a report by the Honorary Treasurer and Honorary Secretaries regarding the Journal and Proceedings.

F. H. M. CORBET,
Honorary Secretary.

Extract from the Minutes of a Meeting of the Council of the Asiatic Society of Ceylon and Ceylon Branch of the Royal Asiatic Society, held in the Fort Library on Tuesday, August 5, 1890, at 4·30 P.M.

8. Mr. Rámanáthan deprecated the delay which takes place in the publication of the Journals of the Society. The Honorary Secretary urged that Papers contributed to the Society should be printed before being read. After some discussion it was resolved that the Honorary Treasurer and Honorary Secretaries be requested to submit some proposal to the Council for expediting the printing of the Journal, accompanied by a memorandum of the cost.

True copy,

F. H. M. CORBET,
Honorary Secretary.

Colombo, February 19, 1891.

JOURNALS AND PROCEEDINGS.

Colombo, February 19, 1891.

GENTLEMEN,—IN accordance with resolution VIII. passed at a Meeting held on Tuesday, August 5, 1890, empowering us to make some proposals for expediting the publication of Papers read before the Society, and to state the cost, we now tender a report embodying the conclusions we have come to.

2. Instead of the Journals and Proceedings (which have hitherto respectively contained Papers read and accounts of the Meetings) being published separately as hitherto, we would suggest that they be published together under the designation of the "Journal of the Ceylon Branch of the Royal Asiatic Society."

3. The Amalgamation of the Proceedings with the Journal offers the following advantages :—

(*a*) Its appearance will be improved.
(*b*) It will be more handy for readers.
(*c*) It will entail less labour to edit.
(*d*) It can be issued more expeditiously.

4. Persons interested in the subject dealt with in a Paper naturally prefer to peruse the report of the discussion on the Paper at the Meeting at which it was read in immediate connection with the Paper itself, instead of having to turn to separate Proceedings for the arguments, &c.

5. It detracts from the value of a Paper if criticisms made upon it by Members are not published with it. The Proceedings when inserted in their proper place in the Journal are more likely to be read than when published separately. At present they are of comparatively little use and are almost lost sight of.

6. It is proposed to follow the practice of many leading Societies, *i.e.*, to print Papers before they are formally read at General Meetings, and to circulate proofs amongst Members and others likely to interest themselves in the particular subjects dealt with. By this procedure, as soon as Papers have been read and finally revised by the writers, they can be printed off, together with a report of the Meetings at which they were read.

7. It has been found that once a Paper has been read, and the writer has received his meed of thanks, the subject loses its interest even for him. To this cause is probably attributable the delay on the part of some authors in returning proofs of Papers read by them, whereby the issue of the Journal has been greatly hindered.

8. The circulation of proofs of Papers before reading would not only enable those who propose to be present at the General Meetings to prepare themselves for such discussion as may arise, but it would afford outstation Members the opportunity of contributing notes and criticism of value.

9. Finally, it should be added that the Government Printer has expressed himself in favour of the above suggestions, and is of opinion that they need entail little or no extra expense.

We have, &c.,

W. H. G. DUNCAN,
Honorary Treasurer.

H. C. P. BELL,
F. H. M. CORBET,
Honorary Secretaries.

To the Council of the Asiatic Society of Ceylon and
Ceylon Branch of the Royal Asiatic Society.

On the motion of Mr. Seneviratna, seconded by Mr. Rámanáthan, and supported by Mr. Bois, it was resolved to adopt the report.

11. Laid on the table correspondence between the Society and the Government regarding the preservation of objects of Archæological interest.

ARCHÆOLOGY.

No. 109.

Royal Asiatic Society,
Colombo, August 20, 1890.

SIR,—I AM instructed by the Council of the Ceylon Branch of the Royal Asiatic Society to solicit the attention of the Government to the manner in which objects of Archæological interest are protected and conserved in India, and to respectfully suggest that the Government might with advantage adopt in Ceylon rules similar to those in force in the neighbouring continent.

2. A copy of a State Paper on the subject published by the Government of Madras, under number 373, and date the 27th day of April, 1889, is forwarded herewith for reference.

I am, &c.,

F. H. M. CORBET,
Honorary Secretary.

To the Hon. the Colonial Secretary.

ARCHÆOLOGY.

No. 130. Anurádhapura, November 21, 1890.

SIR,—I HAVE the honour to annex for your information copies of letters Nos. 129 of 20th instant and 131 of this date, addressed by me to Government in connection with your letter to the Hon. the Colonial Secretary of the 20th August, regarding the better preservation of objects of Archæological interest.

I am, &c.,

To the Hon. Secretary, Ceylon Branch, Royal Asiatic Society.

H. C. P. BELL, Archæological Commissioner.

ARCHÆOLOGY.

No. 129. Anurádhapura, November 20, 1890.

SIR,—I HAVE the honour to return the enclosed letter and G. O. (Madras) No. 373, 1889, Archæology, received with your letter of August 27, 1890, and to offer the following remarks thereon, for the consideration of Government:—

1. It is generally admitted by those interested in the question of the preservation of antiquities that more effective action than has been heretofore exercised should be taken to put a stop to the undue appropriation or misuse of ruins throughout the Island.

2. Some orders to this end were, it is believed, issued a few years ago, but it is doubtful whether they were given that publicity or enforced with the strictness essential to their efficacy.

3. In addition to those orders, the Legislative Enactment touching the question is Ordinance No. 17 of 1887. This Ordinance follows in some respects the Indian Act, No. VI. of 1878, but in others departs from it materially.

4. It is needless that I should enter into a close comparison of the Ceylon Ordinance with the Indian Act. I shall limit comment to one or two salient points wherein I venture to think the Ordinance No. 17 of 1887 requires amendment on the lines of the Indian Enactment.

5. Clause 1. This, the "Interpretation Clause," is not sufficiently comprehensive. It might be made to run: "For the purposes of this Ordinance Treasure Trove should mean money, coin, gold, silver, plate, bullion, precious stones, *antiquities, or anything of any value* found hidden in the earth or *in anything affixed thereto*." This broader definition, as with Act VI. (India), Clause 3, would cover sculpture, remains of buildings, and other objects of antiquarian interest, as well as coins and articles of intrinsic value.

6. So long as Government continues to assert absolute property in all Treasure Trove, irrespective of its value, and to limit the finders' reward to half the value as a minimum, it would be a mere work of supererrogation to recommend a more equitable treatment of the question. The more summary, if less liberal procedure, of our Ordinance relative to the obligation of finders and possessors, the magisterial inquiry, penalties, &c., meets all practical requirements.

7. On the other hand, if the Government is prepared to reconsider the terms under which treasure is claimed by the Crown, an approximation to the Indian policy is greatly to be desiderated in public interest.

8. The Hon. Mr. E. C. Bailey in his speeches on the Treasure Trove Bill (November 29, 1876 ; February 13, 1878) put the case very forcibly. There is perhaps little buried treasure in Ceylon, but other antiquities of historical or archæological value abound in many districts.

"There was much hidden treasure in India, and much was being perpetually brought to light in various parts of the country, and a very large portion of it was of importance as illustrating either the history, the social habits, religious beliefs, or the artistic skill of the races who inhabited the country in past times. It was therefore an object to prevent articles of this kind being lost or destroyed, and the provision the Bill proposed to make was, he believed, sufficiently liberal to secure to Government an opportunity of purchasing such articles as they might consider of real public interest. Special provisions had been largely introduced into legislation in Europe for this purpose, and had the effect of preserving for national use much valuable property and articles of great historical importance which would otherwise have been destroyed."

9. The outcome was the insertion of a provision in Clause 16 of Act 16 of 1878, giving "the Government a claim, on the payment of a specified percentage in excess of the intrinsic value, to the possession of such articles as it should consider worthy of preservation" on historic or artistic grounds, in the National Museum.

Such wise and openhanded inducement to finders to render a true account to Government Officers of all treasure (including antiquities) has worked well in India, and might equally well be tried in this Island. The just statement of the case by the Governor-General in Council cannot be gainsaid. "Due liberality" and "a proper consideration for the natural claims and expectations of the finders of treasure" must be exercised, and "the object in view will be defeated if those who may discover treasure are not induced by the prospect of a *sufficient* reward to make their discoveries known to the Officials of Government."

10. In this view, I submit that all that is required is a short amending Ordinance, varying the "Interpretation Clause" as above suggested, and modifying the terms of the 6th Clause by declaring the intention of Government to pay the *full value* of the *materials* of any treasure trove (as distinct from their adventitious value as objects of archæological interest) *plus one-fifth of such value*, whenever it is decided by Government to acquire such treasure, or any portion of it.*

11. As a further step towards making the policy of Government regarding the conservation of objects of archæological value more widely known, I would recommend that the Instructions I., II., III., (Appendix ii. to G. O. 373, page 4) should be printed, *mutatis mutandis*, and issued to all Heads of Departments, with directions to give them every publicity.†

12. Copies of the Treasure Trove Ordinance in the *vernacular* should be freely distributed among the headmen throughout the Island.

I am, &c.,

H. C. P. BELL,
Archæological Commissioner.

The Hon. the Colonial Secretary.

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* An amended Ordinance (No. 3 of 1891) has since been passed on the lines suggested.—*Hon. Sec.*

† See annexed Government Circular No. 57, of June 26, 1891, drafted by Mr. Bell.—*Hon. Sec.*

Archæology.

No. 131. Anurádhapura, November 21, 1890.

Sir,—In connection with my letter No. 129 of yesterday I have the honour to supply an omission.

It should have been added that some further protection than is given by the Ordinance No. 17 of 1887 is provided for in the Forest Ordinance (No. 10 of 1885) by "forest produce" being somehow stretched so as to cover ruins.

It may be as well not to expunge "ruins" from the Ordinance of 1885, having once found a place there, for their preservation is thus additionally safeguarded. But in any case the importance of extending the interpretation clause of Ordinance 17 of 1887, by inserting the words suggested by me, demands attention.

The Forest Ordinance does not touch the question of remuneration to finders of objects of archæological value.

I am, &c.,

H. C. P. Bell,
Archæological Commissioner.

The Hon. the Colonial Secretary.

Government Circular No. 57.

Colonial Secretary's Office,
Colombo, June 26, 1891.

Sir,—I am directed to issue for your information and guidance the annexed instructions relative to the better preservation of objects of Archæological interest throughout the Island, and to impress upon you the desirability of taking prompt and effectual steps in accordance therewith for the due protection of ruins, &c., already known in your district, and of any that may be discovered hereafter.

I am, &c.,

E. Noel Walker,
Colonial Secretary.

Preservation of Antiquities.

1. All discoveries of Ruins and other objects of Archæological interest should be reported without delay to the Government Agent or Assistant Government Agent of the district within which the discovery is made. When such report is received, the Government Agent will issue orders for the proper preservation of objects discovered *in situ*, or for their removal to a local Museum (where such exists) or to some other suitable place.

2. As a general principle the Government is entirely opposed to the removal of any object still *in situ*. The great majority of Archæological discoveries consists of the remains of buildings, massive pillars, &c., which cannot be removed, and should for other reasons be preserved where they stand. On the other hand, isolated remains (capitals without their shafts, stray pillars, figures, inscribed slabs, &c., the original site of which is unknown, or such as are lying neglected about the country and liable to be mutilated by the people, may with propriety be removed, in order to save them from future injury, to some

Museum or other safe place of deposit, where they can be seen and studied by all who take an interest in the ancient art, religion, or language of the Island.

3. If the arrangements necessary for securing any object worthy of removal to a local Museum cannot be made without much difficulty or expense by local officers, a special report should be addressed to the Government.

4. Government Agents will furnish the Government with a descriptive catalogue of the contents of any local Museum within their Provinces, and will report all fresh antiquarian discoveries.

5. Government Agents are at liberty to arrange with the Committee of the Colombo Museum, either for the transfer to the Museum of any object the Committee may wish to acquire or for obtaining casts or other impressions of it. In dealing with such cases due weight should be attached to the desirability of completing any particular Archæological series of importance.

12. Read letter dated December 16, 1890, from the Archæological Commissioner, Mr. H. C. P. Bell, C.C.S., suggesting that the whole of the unexpended balance of the "Excavation Fund," or some portion of it, be voted for the prosecution of some further Archæological work at Anurádhapura of a permanent and generally interesting nature:—

ARCHÆOLOGY.

No. 148. Anurádhapura, December 16, 1890.

SIR,—I HAVE the honour to address you regarding the unexpended balance of the "Excavation Fund" in the hands of the Honorary Treasurer of the Society.

I understand that this fund has remained untouched since the expenditure incurred by Mr. S. M. Burrows in excavating the East Chapel of the Mirisawẹtiya Dágaba, and that the balance amounts to nearly Rs. 650.

It may be assumed that the money has been allowed to lie dormant so long, owing to no desirable and legitimate use for it having been suggested to the Society.

In this view it has occurred to me to move the Council of the Society to vote the whole balance, or some portion of it, to the prosecution of some further Archæological work at Anurádhapura of a permanent and generally interesting nature.

For my part I shall be glad to be of any service to the Society in supervising the carrying out of such work whilst stationed at Anurádhapura, and to furnish the Society with a statement of results and expenditure.

Among many alternative undertakings, all attractive, I venture to propose three for the consideration of the Council. The Government Agent (Mr. R. W. Ievers), with whom I have already discussed the question, permits me to state that he coincides fully with the selection—

(i) The restoration of one of the two "Pavilions" near the Ruwanweli Dágoba (Lawton, vol. II., 171-72; Hogg. 32).

(ii) The restoration of some portion of the unique "Buddhist Railing" recently discovered by me near the Abhayágiri.

(iii) Further excavation at the Jétawanaráma, or some other of the principal yet less known ruins.

Should the Council feel disposed to vote the money for all, or any, of the above works, and to entrust me with the supervision, I shall be prepared to engage the necessary labour force and start operations from January 1, 1891.

I am, &c.,

Hon. Secretary, Ceylon Branch, Royal Asiatic Society.

H. C. P. Bell, Archæological Commissioner.

Resolved, that the whole balance be placed at the disposal of Mr. Bell to be devoted to the objects for which the money was originally subscribed.

13. Read a letter from K. Dharmmaráma Sthawira, Principal of the Widyalaṅkára College at Keḷaniya, presenting a copy of his edition of the *Janikiharana* to the Society, and asking if the Society would distribute copies of the work in India and Europe.

Resolved, that whilst conveying the thanks of the Council to Dharmmaráma Sthawira for his donation, he be informed that the Council cannot undertake to distribute copies of his work.

14. At this stage of the proceedings Mr. Wall left the chair, which was taken by Mr. Bois.

15. The Honorary Secretary moved the question of the representation of the Society at the forthcoming Ninth Congress of Orientalists. There not being sufficient materials before the Meeting, no action could be taken in the matter, but Mr. Corbet was requested to make inquiries on the subject when in England, and to communicate to the Council any information he may obtain regarding the Congress.

16. The Honorary Secretary submitted his draft Report for 1890, stating that it had been hurriedly drawn up, and required careful revision. There not being time to consider the Report at the present Meeting, it was resolved, with the Honorary Secretary's consent, that Mr. Rámanáthan be requested to revise the draft on behalf of the Council.

17. Agreed, that the Council should meet again the following day in the Museum Library at 8.30 P.M.

COUNCIL MEETING.

Colombo Museum, May 14, 1891.

Present :

Mr. A. M. Ferguson, C.M.G., in the Chair.

Mr. W. H. G. Duncan, Honorary Treasurer.
Mr. S. Green.
Hon. P. Rámanáthan, M.L.C.
Mr. George Wall, F.L.S., &c., Vice-President.

Mr. F. H. M. Corbet, M.R.A.S., Honorary Secretary.

Business.

1. The Honorary Secretary stated that Mr. J. P. Lewis declined to undertake the duties of Honorary Secretary, to which post he had been nominated the day previous.

2. Resolved, to nominate Mr. E. S. W. Senáthí Raja, B.A., LL.B., &c., an *Honorary Secretary* of the Society in lieu of Mr. J. P. Lewis, C.C.S.

3. Moved by Mr. Rámanáthan, seconded by Mr. Duncan, and carried, that Mr. F. H. M. Corbet, M.R.A.S., be nominated a Member of the Council in the place of Mr. Senáthí Raja.

4. The Honorary Secretary explained the necessity for having a paid officer to assist the Honorary Secretary.

5. Mr. Wall arrived at this stage of the proceedings.

6. Resolved, that an Assistant Secretary and Librarian be appointed provisionally, and that Mr. Gerard A. Joseph be offered the appointment for six months at least,—the Society paying him an *honorarium* for his services.

The Meeting then broke up.

Annual Meeting.

Colombo Museum, May 14, 1891.

Present:

George Wall, Esq., F.L.S., F.R.A.S., &c.,
Vice-President, in the Chair.

Hon. M. C. Abdul Rahiman, M.L.C.
Mr. W. N. S. Asserappa.
Mr. B. G. L. Bremner.
Mr. W. H. G. Duncan.
Mr. W. Arthur de Silva.
H. M. Fernando, M.D., B.SC.
Mr. A. P. Green, F.E.S.
Mr. Staniforth Green.
Dr. Lisboa Pinto, F.E.A., L.M.S. (Bombay), F.R.G.S. (Lisbon.)
Mr. C. E. Jayatilleke.
Hon. P. Rámanáthan, C.M.G.
Mr. F. C. Roles.
Mr. E. S. W. Senáthi Rája, B.A., L.L.B. (Cantab.), M.R.A.S.
H. Sri Summangala, High Priest.
Subhuti Terunnanse.
Mr. W. van Langenberg.
Mr. N. D. M. de Z. Wickremesinghe, M.L.A.U.K.

Mr. F. H. M. Corbet, M.R.A.S., &c., Honorary Secretary.

Visitors: four ladies and six gentlemen.

Business.

1. The Honorary Secretary read the Minutes of the last General Meeting (December 20, 1890), which were confirmed, and announced that at a Meeting of the Council held on the previous day the following gentlemen were elected Members of the Society, viz.:—

Resident Members:—Messrs. J. W. C. de Soysa, A. J. R. de Soysa, C. E. H. Corea, Walter Pereira, J. W. Seneviratna, A. Mendis Gunesekara, Mudaliyár, and Hugh Fraser.

Non-Resident Member:—Pandit Gopi Nath of Lahore, India.

2. The Honorary Secretary read the Council's Annual Report on the progress of the Society's affairs during 1890.

ANNUAL REPORT FOR 1890.

The Council have the honour to submit the following report on the progress of the Society's affairs during the year 1890:—

Members.

The Society has received such considerable accessions to its ranks of late years that at the end of 1890 there were on the

roll :—7 Honorary Members, 14 Life Members, 215 Ordinary Resident Members, and 1 Ordinary Non-Resident Member. This makes a total of 237 Members, which is without precedent since the foundation of the Society in February, 1845.

The number of Life Members and Ordinary Members in 1880 was 72; in 1888 it had risen to 202; in 1889 the number was 211, and in 1890, 237. The Council reports with regret the death of the following Members :—

C. Chellapapillai, G. F. Jayasooriya, and the Hon. W. H. Ravenscroft, C.M.G.

Mr. Ravenscroft was elected a Member in 1879 and President in 1881. At the General Meeting held on July 19 it was resolved "to place on record the sense of regret of the Meeting at the loss the Society had lately sustained by the death of the Hon. W. H. Ravenscroft, C.M.G., ex-President, who had taken a deep interest in the Society."

The following Ordinary Members have resigned, viz., William Blair and C. Eardley Wilmot, C.C.S.

Twenty-four Ordinary Members have been elected, viz.:—A. E. Buultjens (B. A. Cantab.); W. A. de Silva; Hilarion Marcus Fernando, M.D., B.SC. (London), Fellow of the University College, London; Frank Hudson Modder; Charles Edward Jayatilleke; S. D. Maháwalatenne, Raṭémahatmayá; the Hon. M. C. Abdul Rahiman, M.L.C.; Tudor D. N. Rajapakse, Mudaliyár; J. V. G. A. Jayawardene; Dullewe Loku Banda, Adigár of Támankaduwa; William Chapman Dias Bandaranayake; George Ronaleyn Campbell Gordon Cumming; Don Solomon Dias Bandaranayake; Peter Manuel Lisboa Pinto, F.E.A., L.M.S. Bombay, F.R.G.S. (Lisbon); E. S. W. Senáthi Raja, B.A., L.L.B. (Cantab.), M.R.A.S.; M. Kaviráj Shymaldáss, M.R.A.S., &c., Member of the Historical and Archæological Committee of the Asiatic Society of Bengal, Member of the Royal Council of Meywar, Rajaputana [the Non-Resident Member elected in accordance with clause 45 of the Rules]; Felix Reginald Dias, M.A., L.L.M.; Francis Crosbie Roles, M.I.J.; Joseph Saunders Addenbrooke, A.R.I.B.A.; George Duppa Miller; K. L. M. Abdul Kerim, Mudaliyár (Governor's Gate); William Abraham Ratnayeke; Percy Edward Radley.

At the General Meeting in August the Hon. Sir Arthur Hamilton Gordon, G.C.M.G., was elected an Honorary Member in recognition of his distinguished services to the Society.

Exchange of Publications.

The exchanges of our publications for those of other Societies are now made on a more organised system. Numerous

and important additions have been obtained for the Library at a slight expense, and the Society is placed in correspondence with many scientific and learned institutions. The following is a list of the principal Societies now on our exchange list :—

Baltimore	...	Johns Hopkins University.
Batavia	...	Genootschap van Kunsten en Wetenschappen.
Bombay	...	Anthropological Society.
Do.	...	Branch of the Royal Asiatic Society.
Calcutta	...	Asiatic Society of Bengal.
Do.	...	Indian Museum.
California	...	Academy of Natural Sciences.
Davenport	...	do. do.
Hague	...	Bijdrajen tot de Taál-Land en Volkenkunde van Nederlandsch-Indie.
Leipzig	...	Deutsche MorgenlandischeGessellschaft.
London	...	Royal Asiatic Society of Great Britain and Ireland.
Do.	...	Royal Colonial Institute.
Do.	...	Anthropological Institute of Great Britain and Ireland.
Do.	...	Geological Society.
Do.	...	India Office Library.
Madras	...	Literary Society.
Montreal	...	Geological and Natural History Survey of Canada.
Melbourne	...	Royal Society of Victoria.
Moscow	...	Société Imperiale des Naturalistes de Moscou.
New Haven	...	American Oriental Society.
New York	...	United States Geological Survey.
Paris	...	Musée Guimet.
Do.	...	Société Zoologique.
Pekin	...	Oriental Society.
Philadelphia		Academy of Natural Sciences.
Do.	...	Wagner Free Institute of Science.
Shanghai	...	China Branch of the Royal Asiatic Society.
Singapore	...	Straits Branch of the Royal Asiatic Society.
Sydney	...	Royal Society of New South Wales.
Trenton	...	Academy of Natural Sciences.
Tokyo	...	Asiatic Society of Japan.
Vienna	...	K. K. Naturhistorischen Hofmuseums.
Washington		Smithsonian Institution.
Do.	...	Bureau of Education.

General Meetings.

Five General Meetings were held this year.

At a Meeting held on May 23, Mr. H. C. P. Bell, C.C.S., Archæological Commissioner, Honorary Secretary, read extracts from his "*Report to Government, Historical and Antiquarian, on the Kégalla District*," the first fruits of the newly inaugurated Archæological Survey of Ceylon.

On July 19 a translation by Mr. F. H. de Vos of the "*Report by Henricus van Bystervelt of his Embassy to the Court of Kandy in* 1671" was read.

At the Meeting on August 30 a short Note by Mr. Frederick Lewis on "*The Nidification of the red-faced Mal-kohá*" was read. Mr. Frank H. Modder read an illustrated Paper on "*The Animal-shaped Rocks of Kurunégala: their history, legends, traditions, &c., with Notes on Temples standing thereon, or connected therewith.*"

On November 22 Mr. Donald W. Ferguson, M.R.A.S., read his Introduction to and a resumé of Lieut.-Col. St. George's translation of "*Juan Rodriquez de Saa y Menezes' Rebelion de Ceylan, y los progressos de su Conquista en el gobierno de Constantino de saa y Norona.*"

On December 20 Mr. George Wall, F.L.S., F.R.A.S., read his Third Paper on "*The Ancient Industries of Ceylon.*"

Ancient Literature.

It is to be regretted that but little progress has been made during the year under review in collecting ola MSS. for the Government Oriental Library.

The Council went fully into the matter in their Report for 1889, and they trust that their recommendations will be carried out by the Government.

Maháwaṇsa.—The long-looked-for translation of this valuable work was published. The translation has been much appreciated by Oriental scholars and others interested in Siṇhalese literature. The following from Trübner's Record regarding this important work will be read with interest:—

"In a remarkable letter which Sir W. H. Gregory, after quitting his post as Governor of Ceylon, addressed to the Earl of Carnarvon on August 1, 1877, concerning the literary and scientific work undertaken during the five years of his Government of that Colony, we find among the important recommendations made to his successor, Sir James Longden, the following:—'That the editing of the *Maháwaṇsa* may be thoroughly completed by the translation into English of all that has been left incomplete by Turnour. That the text of the first part be revised, the variants inserted, and a translation be made of it into

Sinhalese, to correspond with what has been done in the case of the second part. That the Tíká, or early Commentary, be revised and translated into Sinhalese and English.' The edition of the Páli text of the second part, together with a translation into Sinhalese by the High Priest Sumangala and the Pandit Batuwantudáwe, had then already appeared, and that of the first part was passing through the Government Press, while arrangements were in progress with the Mahá Mudaliyár L. de Zoysa for continuing the translation commenced by Turnour. Unfortunately, the Mahá Mudaliyár was for a long time unable to make any progress in the translation through failing health and loss of sight, and as he was anxious to complete his catalogue of MSS. in the Temple Libraries of Ceylon, the task of furnishing the translation of the second part of the Mahávansa was entrusted to Mudaliyár L. C. Wijesinha, who has acquitted himself of it in a scholarly manner. L. de Zoysa, Mahá Mudaliyár, died in March, 1884. The length of time that has elapsed since is amply compensated for by the excellence of Mr. Wijesinha's work. What still remains to be done is a critical edition and English translation of the Tíká, and we trust the Ceylon Government will not lose sight of this important part of Sir W. H. Gregory's programme.

"The translator rightly follows the printed text, and gives his reasons whenever he deviates from it; see his note B on chapter XXXIX., and his notes on chapter LXVI., 150; chapter LXXVI., 30, 91, 171, 327; chapter LXXVII., 52. He also reproduces Turnour's translation, marking, however, in italics the faulty words and passages, for which he substitutes in foot-notes his own rendering. The changes he has thus proposed are obviously important and numerous, and he deserves our warm acknowledgments for the pains he has taken in this revision."

Several ancient works have been printed and published for the first time; amongst them are :—

Dakshiṇa Vibhanga Sútraya (Páli), edited by M. Ñáṇissara Sámi.

Sevulsandésa: Cock's Message (Sinhalese), probably 15th century, by J. Samaradiwákara.

Visuddhimárgaya (14th, 15th, and 16th Parts), (Páli, 5th century), of Buddhaghosa Thera, by M. Dharmaratna.

Saddharmálankáraya, Part I. (Sinhalese), by M. Ñáṇissara Unnánse.

Dhátuwansaya (Sinhalese), by Kakusandhi Mahá Théró.

Abhidhamma Aṭṭhasálini Attayana (Páli), by K. Paññásékhara Sthavira.

Samanthakúṭa Warṇána by W. Dhammánanda Théró and M. Ñáṇissara Unnánse.

Mahábódhiwansó (Páli), by Pedinnuwe Sóbhita.

Moggalláyana Vyákaraṇa (Páli), by H. Déwamitta Théró.

Vritta Málákhyáva (Sinhalese and Sanskrit), by Pandit Batuwantudáwe.

Nikáya Sangrahawa (Sinhalese), 14th century, edited by D. M. de Zilva Wickramasinghe.

Library.

The number of volumes, including separate parts of periodicals added to the Society's Library since the commencement of 1890, amounts up to date to 355. Many of these books have been presented to, and many others obtained in exchange by this Society. The names of the following donors amongst others may be mentioned, viz. :—

The Secretary of State for India.
The Government of Ceylon.
The Government of India.
The Government of Madras.
The Trustees of the Indian Museum.
Director-Général de Statisque la Plata.
The Asiatic Society of Bengal.
The Hon. Sir Arthur H. Gordon.
Messrs. A. M. and J. Ferguson, D. W. Ferguson, H. C. P. Bell, F. H. de Vos, A. O. Joseph, George Wall, and F. H. M. Corbet.

Books registered under Ordinance No. 1 of 1885, consisting of 100 English, 128 Sinhalese, 8 Páli, 1 Sanskrit, 5 English and Sinhalese, 6 Sanskrit and Sinhalese, 1 Sinhalese or Elu, 12 Tamil, 1 Portuguese, 4 Sinhalese and Páli, 2 Páli and Sinhalese, 1 Sinhalese and Sanskrit, and 1 Malay were printed in Ceylon.

A new catalogue of the Library is being compiled by the Librarian of the Society, Mr. de Zilva Wickramasinghe.

The last catalogue was issued in 1882, and since then a very large number of books have been added to the Library. The style of the catalogue has been approved by the Committee of the Colombo Museum, and is in accordance with the directions given in the standard works of Cutter, Wheatly, Perkins, &c., on cataloguing. It is propcsed to enter the books (*a*) under names of authors, or if anonymous under the first word of the title not being an article, (*b*) under their specific titles, (*c*) under the subjects they treat of, with numerous cross references, (*d*) under the form of literature, as poetry, sermons, &c. All these entries will be arranged alphabetically, so that one may know what books the Library contains by a given author, on a given subject, and in a given kind of literature. The numbers of editions of books will also be given, in order to assist the Members in the choice of books.

Archæological Survey.

It is with feelings of satisfaction that the Council refer to the progress that has been made during the year in the systematic survey of the Archæological remains of the Island.

It is matter for sincere congratulation that this important work has been entrusted to so competent an officer as Mr. H. C. P. Bell, C.C.S., and that it is being carried on vigorously and with the care and attention it deserves.

Dutch Records.

The Council have learnt with satisfaction that the representations made on behalf of the Society to the Government on the subject of the Dutch Records have led to provision being made in the Supply Bill of 1891 for Rs. 200 for the preservation and translation of these records.

Journals.

The following Journals, ably edited by Mr. H. C. P. Bell, Honorary Secretary, were printed at the Government Printing Press and published in 1890 :—

Vol. II., No. 5, 1849-50, reprint.
Vol. X., Nos. 36 and 37, 1888.

Journal Vol. XI., No. 38, 1889, and the Proceedings for 1887-8 are going through the press.

Thanks.

The thanks of the Society are due to the Ceylon Government for allowing your publications to be printed at the Government Press, and to Mr. G. J. A. Skeen, the Government Printer, and his Assistants, for the care bestowed upon the work, and the admirable manner in which it has been done, as well as for their never-failing readiness to serve the Society.

Prospects for 1891.

The following Papers have been received :—

Translation of extracts relating to Ceylon from "*De Hervormde Kerk in Nederlandsch Oost-Indie onder de Oost-Indische Compagnie* (1602-1795), *door C. A. L. van Troostenburg de Bruyn.*" By F. H. de Vos, Esq.

"*Ribeiro's Account of the Siege of Colombo in* 1655-56." Translated by Donald W. Ferguson, Esq.

Mr. Frank H. Modder, the author of the interesting Paper on "*The Animal-shaped Rocks of Kurunęgala,*" is engaged in compiling for the Society "*A Gazetteer of the Seven Kóralés,*" dealing with the ancient and modern divisions of the district, and the villages therein situated ; the rivers, oyas, and elas, and the mountains and hills lying

therein ; the architectural and archæological remains, rock temples, dágabas, statues, carving, inscriptions, tanks, mounds, jewellery, coins, pottery, and all other antiquities existing in the district ; the history of the villages, and the legends and traditions connected therewith ; the manners, customs, habits, and institutions of the people ; the commerce, manufacture, revenue, and population ; the castes and religions, the fauna and flora of the district ; and all other useful information tabulated for the purposes of easy reference and illustrated with maps.

The Council hope that the monographs now being prepared by the several Government Agents will materially further the objects which the Society desires to promote.

Finances.

The annexed statement of the receipts and expenditure of the Society for this year shows a credit balance of Rs. 306·41 brought forward from 1889, and an income of Rs. 2,843·75, making a total credit of Rs. 3,150·16, which is more than double that of the previous year. The expenditure incurred during the year was Rs. 2,347·62, leaving a balance of Rs. 802·54 carried forward to 1891 to the credit of the Society.

The amount expended on purchase of books was Rs. 909·32 and on printing Rs. 836·83, as against Rs. 177·26 and Rs. 237·83, respectively, in 1889.

The thanks of the Society are due to Mr. W. H. G. Duncan, Hon. Treasurer, for having brought the finances of the Society to so healthy a condition.

General Account for 1890.

Dr. The Honorary Treasurer in account with the Royal Asiatic Society (Ceylon Branch). *Cr.*

1890.	Amount. Rs.	c.	1890.	Amount. Rs.	c.
To Balance brought forward in Bank of Madras	306	41	By Purchase of books ..	909	32
,, Members' Subscriptions ...	2,146	75	,, Printing ...	836	83
,, Life Members' Subscriptions, 1890 ...	123	50	,, Charges Account ...	581	47
,, Government Grant ...	500	0	,, Grant for Excavations at Vavuniya ...	20	0
,, Entrance Fees ...	73	50	,, Balance at Bank ...	802	54
Total ...	3,150	16	Total ..	3,150	16

E. & O. E.

W. H. G. Duncan,
Honorary Treasurer.

Colombo, December 31, 1890.

Note.—The balance of the Anurádhapura Excavation Fund in hand amounts to Rs. 642·21.

The CHAIRMAN remarked that the Annual Meeting ought to have taken place in January last, but circumstances which Mr. Corbet, the resident Honorary Secretary, could not overcome had prevented it being held then, and from one cause or another it had been delayed until the present time. Though late, the Report which had been read referring to the year that was past would have interested them all very much. It at least showed that the Society had extended its operations abroad as well as locally. It showed that there was work going on notwithstanding that during the last few months there had been something like a little stagnation, and that work as recorded in the Report it must be admitted was good work. He had therefore to ask whether the Meeting would adopt the Report.

The Hon. P. RÁMANÁTHAN had much pleasure in moving the adoption of the Report. In doing so he could not help congratulating the Society upon the very successful results which it had achieved during the past year. He hoped that in future years the Society would be able to show as much good result as in the past.

Mr. BREMNER seconded, and on the motion being put to the Meeting the Report was unanimously adopted.

3. Dr. H. M. FERNANDO moved the election of the following Office-Bearers for the year :—

President.—The Right Rev. R. S. Copleston, D.D., Lord Bishop of Colombo.

Vice-Presidents.—Mr. George Wall, F.L.S., F.R.A.S., and Mr. Thomas Berwick.

Council.—Mr. Henry Bois ; Mr. H. H. Cameron, C.C.S. ; Colonel the Hon. F. C. H. Clarke, R.A., C.M.G. ; Mr. F. H. M. Corbet, M.R.A.S. ; Mr. A. M. Ferguson, C.M.G. ; Mr. Staniforth Green ; Mr. J. P. Lewis, C.C.S. ; the Hon. T. B. Panabokke ; the Hon. P. Ramánathán, C.M.G., M.L.C. ; Mr. W. P. Ranasingha, Proctor, Supreme Court ; the Hon. A. de A. Seneviratna, M.L.C. ; Dr. Henry Trimen, M.B., F.R.S.

Honorary Treasurer.—Mr. W. H. G. Duncan.

Honorary Secretaries.—Mr. H. C. P. Bell, C.C.S., and Mr. E. S. W. Senáthi Raja, B.A., LL.B.

Mr. F. C. ROLES in seconding remarked that he thought the Members should know that the new Members of Council were Mr. Lewis and Mr. Corbet ; the latter's place as Honorary Secretary was taken by Mr. E. S. W. Senáthi Raja, B.A., LL.B., M.R.A.S. He must not forestall any possible vote of thanks that might be passed to Mr. Corbet, but he wished to express his pleasure that Mr. Senáthi Raja should have consented to occupy the position of joint Honorary Secretary.

The Office-Bearers were cordially elected.

4. The CHAIRMAN took the opportunity of returning the thanks of the Society to Mr. Corbet, who was now, for a time at least, resigning the Honorary Secretaryship, on the eve of his departure for England. His services had been appreciated by the Society thoroughly and deservedly. They should be very glad indeed to welcome him back after his sojourn at home, and he was sure all joined in hoping that he would have a pleasant and happy holiday.

5. Mr. CORBET read some extracts from a translation by Mr. Advocate F. H. de Vos of extracts relating to Ceylon from "*De Hervormde Kerk in Nederlandsch Oost-Indie onder de Oost-Indische Compagnie* (1602-1795), *door C. A. L. van Troostenburg de Bruyn.*"

Mr. Corbet explained that the book from which the extracts were taken was an account of the Reformed Church in the Netherlands East Indies. The extracts were very voluminous, and those read bristled with statistics regarding the number of Christians and churches in the Island during the seventeenth century and the beginning of the eighteenth. Mr. Corbet remarked that the extracts were so numerous that it would be impossible to go through them all on that occasion, and if it was the wish of the Meeting, the reading of the Paper could be concluded at another time.

The CHAIRMAN said that the sense of the Meeting might be taken as to whether the reading of the Paper should be continued or discontinued. The extracts were largely statistical and such as not to be very readily followed when being read, and it seemed to be simply a trial of their patience to continue the reading. When printed the Paper would be more readily understood and more acceptable than in its present form.

Mr. A. M. FERGUSON said they should however take care to acknowledge their indebtedness to Mr. de Vos for the great pains he had taken in translating a very important historical document, which would be exceedingly useful as throwing light on the history of our predecessors in Ceylon.

The Hon. P. RÁMANÁTHAN added that was precisely the view that struck him. He did not know exactly the purpose of the Paper, because on the card there were lots of Dutch words strung together, and he did not understand a word of Dutch. The conversions in those days seemed to have been enormously great, and his interest was raised in the Paper owing to the discovery of that fact, and of course he should read it carefully when be got it in print. They were not able to deal with the statistics and so on that it contained at present. He was sure they were executing the wish of the Meeting in acknowledging the services of Mr. de Vos in preparing so interesting a

Paper upon this subject. He should like to know who the author of the Paper was, when he flourished, and when he wrote it?

Mr. CORBET replied that this was a modern book, but how it came to be written as though it had been written early in the century he did not know. It was published only five or six years ago. The author was Mr. C. A. L. van Troostenburg de Bruyn, but as Mr. de Vos had furnished no information regarding the writer, he did not know anything about him.

The CHAIRMAN said he should be sorry indeed if the suggestion he made should in any way reflect upon the merit he attached to the pains that had been taken and the value of the work done by Mr. de Vos. It appeared to him as a listener like themselves that the style of the Paper was not such as to command the entire interest of the Meeting while being read. It was for that reason only that he referred to their choice as to whether the reading of the Paper should be continued. He thought he understood the sense of the Meeting to be that the further reading of the Paper should be deferred. Mr. Rámanáthan had been good enough to refer to the remarkable number of conversions that took place in those ancient days, and he thought it had been generally spoken of amongst those who had written on the History of Ceylon and the progress of religion here that the action of the Government was calculated to cause people to embrace the religion of the ruling power perhaps with less regard to their consciences than would be considered at the present day.

The Hon. P. RÁMANÁTHAN suggested that it would be well if they postponed the discussion of the Paper till they had been favoured with printed copies, so that they might be able to compare what Tennent had said about Ceylon with the statements which this author made, and otherwise better prepared to discuss the Paper. He proposed that the reading of the Paper be deferred till it had been printed and copies put into the hands of Members who were desirous of raising a discussion upon it.

Mr. W. H. G. DUNCAN seconded, and this was unanimously agreed to.

6. The Venerable H. Sri SUMANGALA, High Priest of Adam's Peak, then addressed the Meeting in Sinhalese, Mr. Arthur de Silva acting as Interpreter. He said they had come to understand that Mr. Corbet who had been in charge of the Library was about to proceed home. They wished him a prosperous voyage and hoped he would return to the Island very soon. They felt very sorry for the time he was to be away from them. The Library in this place was of great value to the students of Ceylon, and they

knew well that Mr. Corbet took a great interest in giving that benefit to the young men. Even now a great many of the students have derived a good deal of benefit from the Library. Many Buddhist priests—there were about fifty—took advantage of the Library, and he had come to know that these priests found it very easy to make their references in this Library and also their studies. The chief libraries in Colombo were the Oriental Library and the Library at Maligákanda, which was greatly used by the students of the Pansala and a few others; the Museum Library was the public Library where most of the public students went. In conclusion, he hoped Mr. Corbet who had been working all this time in this Museum so well would return from his trip home, and would resume his work for the advantage of the public.

The CHAIRMAN wished the interpreter to mention to the High Priest that the sentiment to which he had given utterance had been already expressed with regard to the services of Mr. Corbet and the wishes of the Society for his early return.

7. The proceedings terminated with a vote of thanks to the Chairman, proposed by the Hon. Mr. Rámanáthan and seconded by Mr. A. M. Ferguson and Dr. Fernando, simultaneously.

COUNCIL MEETING.

Colombo Library, May 29, 1891.

Present :

The Lord Bishop of Colombo, President, in the Chair.

Mr. George Wall, F.L.S., F.R.A.S.
The Hon. A. de A. Seneviratna, M.L.C.
Mr. W. H. G. Duncan, Honorary Treasurer.
Mr. E. S. W. Senáthi Raja, Honorary Secretary.

Mr. Gerard A. Joseph, Assistant Secretary.

Business.

1. There being no record in writing of the Proceedings of the last Council Meeting it was brought to the recollection of this Council that on that occasion (May 14) it was agreed (1) to recommend to the General Meeting of the Society the appointment of officers, including that of Mr. Senáthi Raja as Honorary Secretary, and (2) on the authority of the Council under rule xx., to offer Mr. Gerard A. Joseph the appointment of Assistant Secretary, for a period of six months at least, the Society paying him an *honorarium* for his services.

Resolved,—(2) That the Honorary Secretary be authorised to extract the account of the Annual Meeting of the Society from the *Ceylon Independent* of May 16, and insert it in the Minute Book of the Society as a record of the Proceedings, subject to the usual confirmation.

Resolved,—(3) On the motion of Mr. Duncan, seconded by the Hon. A. de A. Seneviratna, that a General Meeting of the Society be held on June 9, 1891.

Resolved,—(4) That Mr. Wall be requested to read his Fourth Paper on "*The Ancient Industries of Ceylon*," and that it is not deemed necessary in the present case that the Paper should be first submitted to the Council for consideration and approval.

Resolved,—(5) That in view of the Hon. P. Rámanáthan's proposal at the General Meeting, Mr. de Vos's Paper (a part of which was read at that Meeting) be published as soon as possible.

Resolved,—(6) That the Secretary be authorised to incur for the present such expense as is necessary for conveying letters, &c., and getting other work of a similar nature done for the Society.

Resolved,—(7) That the following gentlemen be elected Members of the Society, viz. :—Messrs. J. B. M. Ridout, A. D. Renganáthan, T. Sammogam, and James Morell Chitty, Advocate, Supreme Court.

General Meeting.

Colombo Museum, June 9, 1891.

Present :

The Lord Bishop of Colombo, President, in the Chair.

Mr. Henry Bois.
Mr. Stanley Bois.
The Rev. W. Charlesworth.
Mr. M. Cochran, M.A., F.C.S.
Mr. W. H. G. Duncan.
Miss Frédoux.
Mr. C. E. Jayatilaka.
Mr. F. C. Roles.
Mr. A. T. Shamsuddin.
Mr. George Wall, F.L.S., F.R.A.S., Vice-President.

Mr. E. S. W. Senáthi Raja, M.R.A.S., &c., Honorary Secretary.
Mr. Gerard A. Joseph, Assistant Secretary.

Visitors : five ladies and six gentlemen.

Business.

1. The Minutes of the last General Meeting (May 14, 1891) were read and confirmed.

2. The accessions to the Society's Library since the last Meeting were laid on the table.

3. The Honorary Secretary announced that Messrs. J. B. M. Ridout, District Surveyor ; A. D. Renganáthan, District Engineer ; Tambeyah Sammogam ; and James Morrel Chitty, Advocate of the Supreme Court, had been elected Resident Members of the Society at the last Meeting of the Council.

4. Mr. George Wall, F.L.S., F.R.A.S., Vice-President, read his Paper on—

A HISTORY OF THE ANCIENT INDUSTRIES OF CEYLON.

By George Wall, Esq., F.L.S., &c., *Vice-President.*

(*Fourth Paper.*)

In the discussion of the previous Paper it was stated by two of the speakers that the inferences therein were at variance with explicit statements of the *Maháwaṉsa.* Reference was made, however, to only two discrepancies, both of which had been fully met in previous lectures. One is the inference that the rice with which Kuvéni regaled Wijayo's party was procured from wrecked ships. It has already been

shown that it would be absurd and contrary to rules of inference to regard such a solitary fact, even if it were an undoubted fact, as proof that there was no locally-grown rice. At best, it is but a flimsy scrap of evidence, which is opposed to the tenour of the whole history. This argument will however be reverted to in the sequel.

The other supposed discrepancy specified is that the Island is said to have been "uninhabitable by men," and that Kuvéni, who entertained Wijayo's party, was herself a Yakkini. The answer already given to this argument is that the behaviour of Kuvéni; the counsel she gave her guest; the luxurious bed and other surroundings described in the narrative; her entertaining the party with rice and victuals; her becoming Wijayo's wife and bearing him children, all prove that she was a woman of like passions with women in general; and every incident of the history from the landing to the dispersion and settlement of Wijayo and his ministers equally prove that the people were ordinary men. If they were sometimes called devils, so also are we all by our Chinese neighbours. Snake worshippers of Assam are called Nágas. Other points raised during the discussion of the previous Paper were foreign to its purpose. They referred either to times anterior to the period under review and beyond the records of reliable history, or to matters outside of the scope of the present inquiry. It must be clearly understood that these Papers do not pretend to prove *who* the people were that Wijayo found in occupation,—whence they came,—or what race they belonged to. They are concerned with the condition of the people,—what they did,—and what were their means of doing it. Therefore, to follow further the points raised at the previous discussion would be to lose sight of the industries of the people and to pursue other topics, interesting in themselves, but foreign to the inquiry in hand.

It may be remarked incidentally, however, in regard to the allusion made by a speaker to what Panduwo might have been expected to do in regard to Ceylon, that the conjecture was inconsistent with the fact that that monarch, only a very

few years after Wijayo's accession, sent his own daughter and the daughters of several of his nobles to "renowned Sihala," the former as bride to the new king, and the latter to be married to his ministers; a proceeding which proved that he at least, the closest neighbour, did not believe the Island to be peopled by savage demons or cannibals. He may be presumed to have known the real state of affairs of that period even better than the critic who speculated twenty-five centuries later on his probable line of conduct.

The authority on which all the inferences in these Papers rest is that of the *Maháwanṣa*, and it is important to show that such is the fact, but in no case is a conclusion drawn from a single casual circumstance, nor is such evidence admitted here unless supported by collateral evidence, and consistent with the general tenour of the history. To generalise on unimportant single facts is neither logical nor just.

This inquiry is the first attempt to solve the problem of the origin and growth of the wealth necessarily implied in the existence of the courts, institutions, and conditions described or incidentally mentioned in the historic narrative, and it would not have been undertaken but for the strong testimony borne by the translator, Mr. Turnour, to the authenticity of the *Maháwanṣa*. The works and proceedings attributed to the kings of the Wijayan dynasty during the brief period of their rule, and the skill and resources their works imply, would have been impossible to any but a settled and partly civilised people, and are wholly incompatible with the conditions of a people who had no regular agriculture and lived on fruit, honey, and the produce of the chase, not only when Wijayo landed, but "for several centuries afterwards."

Considering the novelty of the present inquiry, and that the inferences in the preceding Papers are opposed to those of the high authority above quoted, it seems desirable, before proceeding further, to confirm and establish the groundwork on which all the subsequent chapters must depend.

With this view, further evidence will be adduced to confirm the conclusions of previous chapters to the effect that the

chief industry and main source of national wealth at the time of Wijayo's landing and for "several centuries afterwards" was agriculture, and that it was directed almost entirely to the cultivation of the staple food of the people. What that food was will form the first subject of inquiry. An enumeration of all the passages that have reference to food in the *Maháwaṉsa* will leave no room for doubt on that subject. They are as follows :—

The first mention of food is that of the repast given by Kuweni, the princess, to Wijayo and his party, which consisted of "*rice* and a vast variety of other articles."

The next allusion to food is in regard to a visit of the young Prince Paṇḍukábhaya to Girikaṇḍasíva, uncle of a rich Brahman, who, at a cost of 100,000 pieces of money, had raised an army of 1,200 warriors to support the young prince's claim to the succession. The words of the narrative are the following :—

"At that time Prince (Girikaṇḍasíva) was superintending the reaping of a harvest of 100 karisa of land : his daughter, named Páli, was a lovely princess. She, radient in beauty, attended by a great retinue, and reclining in a palanquin, was on her way taking a prepared repast for her father and the reapers. * * * The princess, descending from her palanquin, * * presented the Prince (Paṇḍukábhaya) with *rice* in a golden dish."

This, be it observed, occurred in the reign of Wijayo's immediate successor.

In the next reign but one, that of Déwánampiya Tissa, 307 B.C., in an interchange of precious gifts, Dhammásoka sent 160 loads of "hill paddy" from India to his friend in Ceylon, accompanied by a diadem, a sword of state, a golden vase, and a royal virgin, among other articles of great value. The apparent incongruity of hill paddy in such company is explained by the circumstance that it is said to have been brought from some mysterious country by parrots. At page 16 of the *Maháwaṉsa* it is described as "royal food."

The same monarch (Dévánampiya Tissa), "making offerings to the théras," himself served them with "*rice* broth, cakes, and dressed *rice*."

Having placed his chariot at their disposal and "spread sumptuous carpets" for these théras, and "bowed to them with profound reverence" (p. 53), the repast he himself served must have been of the best and choicest, and it consisted entirely of "*rice*." 307–267 B.C.

Referring to the same period, "the keeper of the royal garden produced to the king a superb full ripe mango of superlative excellence in colour, fragrance, and flavour. The king presented this delicious fruit to the théra and "had a splendid carpet spread out" for him, as it was necessary according to the rules of his order that he should be seated while eating.

In order that no mention of food may be omitted here two very trivial incidents must be stated, one of an old woman who put out "*paddy* to dry" (p. 82), the other, of a certain royal lady for whom Duṭṭha Gámani procured honeycomb to satisfy her earnest longing (p. 86). 161–137 B.C.

The King (Duṭṭha Gámani) having realised certain desires, is said to have "exceedingly rejoiced, presenting the priesthood with *rice* dressed in milk."

On the occasion of the weaning ceremony of the two princes "this affectionate parent again bestowed the alms of *milk-rice* on 500 priests. The monarch, assisted by the queen, having collected into a golden dish a little from each of the priests' dishes, he put a handful thereof in the mouth of each, and said: 'My children, if ye ever become subverters of the true faith may this food never be digested.'"

Ten years later the king "having entertained the priesthood as before," administered an oath to the young princes, never to make war with the Dámilas, whereupon Tissa flung the portion from him. Gámani also spurned away his handful of "*rice*" (p. 87). The offering to the priests was therefore also of "*rice*" as on the weaning ceremony.

In the narrative of Duṭṭha Gámani's early career (161–137 B.C., p. 94) it is related that the king said to his minister

Tissa, "we are famished"; whereupon the minister presented to the monarch some "dressed *rice* placed in a golden dish."

On another occasion "the pious monarch, having offered them (the priests) seats, presented them with *rice* broth and other refreshments."

Tissa, the young prince on whose account the foregoing presentation of rice was made, was sent back home by the king "to superintend the agricultural works in progress there. He similarly employed himself also, calling out the people by beat of drums."

On commencing the great work of the Brazen Palace this munificent Rája (Duṭṭha Gámani) "deposited at each of the four gates eight lacs to remunerate the workmen, also a thousand suits of clothing, as well as vessels filled with sugar, buffalo butter, palm sugar, and honey," and he paid "the workmen with *money*" (p. 104).

A merchant is described as giving the priest four dishes of "the juice of *jakfruit*" (p. 107).

On the celebration of the festival (of the building of a thúpa) "the king caused to be collected there *honey*, clarified *butter*, *sugar*, and other requisites" (p. 109).

In his dying moments, King Duṭṭha Gámani (137 B.C.), contemplating and recounting his charities and meritorious deeds, is represented as saying (p. 125): "I have bestowed at forty-four places *rice* prepared with sugar and honey; and at the same number of places rice prepared with butter; at the same number of places confectionery dressed in clarified butter; at the same number of places ordinary *rice* constantly * * * I have caused to be provided for each priest endowed with the gift of preaching, clarified butter, sugar, and honey, a 'náḷi' of each; I have provided a handful of liquorice, and also two cloths for each * * The chief théra, Máliyadéva, one of the five priests who had accepted the *kangu* mess, dividing the same among five hundred of the fraternity, himself partook of it."

A foot-note to the new edition (p. 125) explains that *kangu* is a sort of millet.

The passages above quoted comprise every mention of food that occurs in the *Maháwaṉsa*, from the time of Wijayo's landing, 543 B.C., to the death of Duṭṭha Gámani, 137 B.C., a space of 376 (or more probably 316) years, with the exception of an incidental mention by Paṇḍukábhaya, when a boy, to the son of a herdsman, when sending him on an errand, that he would get "roasted meat" there. This was the flesh of a "wild quadruped" the herdsman had killed, probably some kind of game, and has little, if any, bearing on the question of national diet.

The most striking feature of these quotations is the remarkable simplicity and uniformity of the fare, notwithstanding that the occasions to which reference is made are nearly all such as were sure to bring forth the best that even kings could command for the entertainment of their most distinguished guests. In every case, except the last of all, *rice* constituted the substantial basis of the diet of prince and people, rich and poor, whether served on a golden dish or eaten off a plantain leaf. Then, as now, people, high and low, would probably speak of their meals as eating their *rice*.

In view of this remarkable simplicity of the fare, even on State occasions, during three to four centuries after the entertainment given to Wijayo by Kuweni, the question arises as to how this lady came to possess the "vast variety of other articles" of food with which she regaled her guests. Referring then to the precise terms in which that feast is described it becomes more than doubtful whether the *rice*, which in this, as in every subsequent feast mentioned in the *Maháwaṉsa*, formed the main item, was included among the spoil from wrecked ships? It seems from the account, as given in these words: "She distributed *rice*—and a vast variety of other articles procured from wrecked ships:" that these "other articles" unspecified, and not the *rice*, were what had been so obtained. On this assumption the difference between Kuweni's repast and all others mentioned in the narrative is simply and naturally accounted for. There is certainly no such vast variety of viand in any other of the entertainments

specified by the same author in the same work. At best, the inference drawn from that solitary fact that there was no rice locally grown is lame and impotent, but when the fact itself is shown to be uncertain, as well as inconsistent with the rest of the history, it becomes still weaker and more worthless. Regarded as an item of the narrative consistent with all the rest, the rice given by Kuweni, the only item specified, should be considered as the rice given on all those subsequent occasions was, namely, as the national food of the period. After twenty-five centuries that have elapsed since the date of Kuweni's feast rice is still the food of the country. It has been proved to have been such less than a century afterwards. Is it then at all probable that a people, so little prone to change as are all Orientals, should have completely changed their national diet just at that period when authentic history began its record ? Is it not much more likely that before, as well as after Wijayo's landing, rice was the staple food, and that Kuweni followed the custom of her country in giving the guests rice along with other things procured from wrecked ships ?

The evidence of the *Mahávaṃsa*, as given in the passages above quoted, affords a satisfactory answer as to what was the national food of the country during the period they cover, but neither their evidence nor the tenour of that work gives support to the theory that the people of that period lived on fruit, honey, and the products of the chase.

A student who should commence the perusal of the *Mahávaṃsa*, under the impression of its being the history of a people subsisting by the chase, would feel some surprise to meet, on the very threshold, with a princess of the country engaged in spinning, and surrounded by such luxuries as the lovely gems and ornaments she wore, the curtained bed she possessed, and the other accessories of the introductory scene. Her familiarity with the affairs of neighbouring courts, the wedding festival she described as about to unite two princely families, and, above all, the court dresses and other circumstances of that ceremonial, would increase his

astonishment. In all this pageant he would miss the skin garments, the feathers and paint, the scalps, skulls, and trophies that form the familiar accompaniments on such occasions, of which he had read on accounts of nomade tribes and "devourers of men."

Proceeding a little further, to read of the dispersion of Wijayo's ministers, to establish his authority, and to found courts and governments all over the country, the student would probably pause to consider how such a dispersion of such men, for such purposes, would have fared among Hottentots, Red Indians, or Bushmen, the present representatives of the mode of life ascribed by Tennent to the people of Ceylon during the first few centuries of the *Maháwan̥sa* history !

The testimony of the *Maháwan̥sa* as to the character of the people and their mode of life, is not less explicit than the evidence it affords of the staple food of the Island. The brief space of time required for the establishing of courts and governments in various parts of the country for the consolidation of Wijayo's rule by his ministers, the embassy to the powerful monarch Paṇḍuwo, the nearest neighbour, only a few years after the landing, for a wife,—that monarch's magnificent response in sending his own daughter, accompanied by numerous noble ladies and a splendid dowry,—and, in short, all the events and circumstances of the narrative combine to prove that the country was inhabited by a settled population, engaged in industries widely different from any pursued by wandering tribes living by the chase. Proofs do not depend upon isolated passages, but abound and constitute the whole tenour of the narrative. The evidence of cities, with cemeteries, royal gardens, palaces, and tanks is even less convincing than such events as Citta's bribing the herdsman's wife with 1,000 pieces of money to conceal and keep her babe ; the story of the two native princes who sat in State with Paṇḍuwasa, Wijayo's immediate successor, on thrones of equal dignity ; the love scene between young Paṇḍukábhaya and the princess on

her way to her father with *rice* for him and his reapers; her descent from her palanquin to offer rice on a golden dish; the rich Brahman's espousal of the young prince's cause, and his raising and equipping an armed force of 1,200 warriors at a cost of 100,000 pieces; these and other episodes that fall naturally into the current of the narrative are more eloquent than any formal statements, and they indicate a mode of life and a character of the people utterly foreign to those of savage hunters and devourers of men. The transformation of cannibal tribes from their characteristic habits, within a century, would be impossible, and is inconceivable; and still more, that they should have arrived at the stage of civilisation which is indicated in the foregoing circumstances, including the use of money and other marks of advanced social conditions.

The inevitable inference, derivable from the history of the first four centuries as recorded in the *Maháwaṇsa* as regards the people, their habits, institutions, and mode of life, is that they were a settled and civilised population.

The hypothesis to which the events recorded in the *Maháwaṇsa* led in the last Paper, namely, that agriculture was the main industry, and therefore the chief source of wealth, is confirmed by the fact that a supply of rice adequate to the feeding of so large a population as is implied in the numerous settlements formed by Wijayo's ministers, and by the works that were accomplished during the first century, could not have been procured from abroad, except by payment, commerce, or barter, of which no evidence exists. Nor could rice have been so procured except by means of indigenous wealth far exceeding what would have been required for its local production. As there is no evidence of any such source of superabundant wealth, the conclusion that the supply was locally grown seems to be as certain as that rice was the staple food. Moreover, this is borne out by the whole history, and accounts naturally and consistently for the wealth required for the works that were done, the institutions established, and the social conditions implied.

All that now remains, in order to complete the object of this Paper, is to adduce from the history such evidence as it affords in confirmation of the hypothesis that agriculture was systematically pursued during the period immediately after Wijayo's landing, and that it was directed mainly, almost exclusively, to the cultivation of rice and the products of the dairy.

If it be satisfactorily demonstrated that such were the pursuits of the people immediately after Wijayo's landing, it must be held to have been so also before that event, for there is not the least evidence of Wijayo's having wrought any change, other than to consolidate the government of the country. He had not the means of doing more. Whatever was done by him and his immediate successors must have been done by the people and the agencies he found to his hand.

The estimation in which agriculture was held, so early as the time of Wijayo's immediate successor, is shown in the scene wherein Girikaṇḍasíva, the Governor of a Province, figures with his reapers, gathering the harvest of his domain, and receives, at the hand of his daughter, his repast of rice.

All the circumstances of that pastoral scene show that agriculture was an honourable pursuit, and carried on upon an extensive scale by prince and people. Seeing that the narrative is no formal statement introduced to prove a case, but is purely incidental, and merely marks an interesting event of the vicissitudinous life of the young prince, its value as evidence of the industry of the period is inestimable. It forms no part of the history proper, but is a simple setting in which an important event of history is framed.

Similar evidence, introduced into the historic narrative in like incidental manner in a subsequent chapter, is equally significant and conclusive. In the narrative of the conflict and reconciliation of the two brothers, Gámani and Tissa, the former is represented as sending his offending brother home, after having pardoned him, to superintend certain

agricultural works that were in progress there. The narrative goes on to state that Gámani himself pursued the same occupation on his family estate, and that he called out his workmen by beat of drum. Agriculture is thus represented, by these and other concurrent evidences, as a national and royal pursuit, carried on throughout the 367 years under review, systematically and by roll-call.

We must not omit to recount the narrative of the old woman who was putting out her paddy to dry in the sun. If it stood alone, or were cited to prove that rice was the national fare, it would be a mean and paltry scrap of evidence on which to found a great generalisation; but occurring as it does, incidentally, to illustrate the paternal care a certain monarch exercised over the poorest of his people; and agreeing as it does with the whole tenour of the history and the habit of the people, it is well worthy of mention in this connection.

The mention, in a very early part of the history, of herdsmen, also in an incidental manner in the story of Paṇḍukábhaya's babyhood, and the part which milk and butter play in the scenes above described, are significant indications of the habits and occupations of the people, and of the prominent position of agriculture as a national pursuit.

According to the *Maháwanṣa*, horticulture, a form of luxury and evidence of refinement, received great attention, even during the earlier part of the four centuries under review. Flowers and fruits, the produce of royal gardens, are mentioned as forming so conspicuous and important a part of religious ceremonials, and on other festive occasions, that they must have been cultivated, not only in the royal public grounds, but also much more extensively. Indeed, luxury is represented as prevailing in almost every form in which it has been indulged by man in his most highly civilised condition, such, for example, as court retinues, pageantry, and pastimes, costly decorations, personal ornaments of gems and precious metals, works of art, and

such dainties as the cook and the confectioner could prepare from such simple materials as they could command for the refined taste of regal and priestly palates.

In a work written as the *Mahâwaṃsa* was, at least as regards the period under review, by priests, for the purpose of recording the introduction and progress of the Buddhist religion in the Island, evidence respecting the industries of the people is sparse, generally indirect, and mostly incidental, but it is not the less reliable on that account. On the contrary, in its record of the events connected with Buddhism the history is characterised by manifest exaggeration of an Oriental type, whereas its references to other matters are apparently free from that fault, in which indeed the writer had little, if any, temptation to indulge. Several of the tanks that are mentioned exist to this day, and bear out fully the allusions and descriptions in the text. The ruins of several dágabas also witness to the accuracy of the record. Hence the signs and indications of great wealth, skill, and resource are indisputable, and the means by which that wealth was acquired are to be inferred with certainty from such passages and events as have just been quoted, and they might be multiplied indefinitely. The pursuit of agriculture by princes and people, though not once stated directly, is plainly implied in many passages besides those above quoted. For instance, when Dévánampiya Tissa marked the boundaries of the ground that was to be consecrated he did it with a golden plough, and he is represented as himself holding the plough shaft.

Similarly, the simple statement that the *rice boiler* of Duṭṭha Gámani's gilt palace had a golden ladle is an unmistakable indication that rice was the food of the prince and peasant, as is elsewhere abundantly shown. The passage in which that trivial but significant fact occurs is worth quoting at length, as follows :—

"The king caused it (the gilt palace) to be provided suitably with couches and chairs of great value, and in like manner with carpets of woollen fabric, even the ladle of the

rice boiler was of gold." Supposing the throne of ivory and the festoons of pearls were Oriental exaggerations, there is the undoubted ring of simple truth in the mention of the *rice boiler*.

Such being the facts of the history recorded in the *Mahá-waṉsa*, and such the tenour of the story of the first four centuries, what becomes of the dictum that at the time of Wijayo's landing and for several centuries afterwards there was no regular agriculture, and that the people subsisted on fruits, honey, and the products of the chase?

Mr. SENÁTHI RÁJA having expressed regret that being away from Colombo had prevented him hearing some of the previous Papers of the series of the "History of the Ancient Industries of Ceylon" contributed by Mr. Wall, said that he had found the Paper read that night extremely interesting, especially from an antiquarian point of view. He thought it had been shown from the materials found in the *Maháwaṉsa* that agriculture was in an advanced state in Ceylon at the time of Wijayo's landing. Any one who studied the historic incidents recorded could hardly doubt that fact. They read of tanks and of princes being employed in agriculture, and perhaps the Island was divided into several provinces, as England was in the time of the Heptarchy. There was mention also of such towns as Laṅká-pura and Siriwardhanapura. Besides these deductions there was external evidence that there was agriculture at the time of Wijayo's arrival. He believed it was now admitted by most Orientalists that the Phœnicians had commercial relationships with Southern India at very early times, as early as perhaps the time of King Solomon, and Ceylon being so near Southern India it was highly improbable that agriculture should be unknown. Possibly the question might arise as to who the inhabitants were. They were in all probablity Nágas and Yakkos, and the coasts were inhabited perhaps by Dravidian people; and they read of a Brahman village shortly after Wijayo's arrival. It was therefore highly probable that agriculture was in a very advanced condition in Ceylon at that period.

The CHAIRMAN (the Lord Bishop of Colombo) said he might be allowed to offer some criticism of the Paper. And there was one criticism which he had ventured to make before, on hearing one of the previous Papers of this valuable series, and which he would repeat briefly in order to add something to it.

He ventured to think that the point which Mr. Wall had established—and which he had undoubtedly proved—would be further strengthened if he relied less exclusively upon the language of the *Mahávaṃsa*. He was not one of those who thought that that history was altogether unauthentic: yet he could not but perceive the events chronicled, concerning the period under review, by the historical writer were not written by him until 950 years after. Nor were they aware of earlier documents from which the alleged events could have been obtained. Therefore, what was known as an historical setting was absent. Besides such passages as that Wijayo was said to be the son of a lion, there were many statements which they must doubt. It was natural to conclude that the writer could only clothe his record of circumstances in accordance with the conditions of life within the knowledge of the historian. Recently a different spirit had arisen, but the author of the *Mahávaṃsa* could not be expected to have done more than infer the surroundings of the ancient events he was recording from the circumstances of his own day. It was quite impossible for him many centuries later to describe accurately the order of things 500 years B.C.

To strengthen the argument as opposed to Sir Emerson Tennent's statement, which seemed no longer tenable, he (the Chairman) would look a little outside and see the condition of the neighbouring countries. The Buddhist books of the *Piṭaka* bore good testimony to the state of the country to which they referred, and by 250 A.D. these made it clear what was the condition of Ceylon, and also who were the people who had authority in the Island. There was little room for doubt, owing to these sources of information, that in the earliest part of the third century B.C. rice was the principal product.

Another form of evidence was, he thought, the existence of Buddhism in Ceylon. That religion, if he might say so, was an agricultural religion. It was clearly impossible that it could be the religion of those who lived by hunting. He remembered on one occasion when he was at a resthouse on the borders of Bintẹnna, he was engaged in conversation with an intelligent native and was referring to the people living on the other side of the river, when his companion replied that those poor people could not be Buddhists—they could not grow paddy, but had to live by the chase. Buddhism always favoured, and was productive of an agricultural condition of society.

His Lordship, reverting to the earlier portions of the *Mahávaṃsa*, spoke of the similarity therein of the descriptions of sculptures and various scenes depicted with those referring to Northern India in the *Piṭakas*.

Mr. WALL, in briefly replying to the remarks made by his Lordship, said he did not think the value of the evidence he had adduced had been impaired, and was glad to find that the Chairman considered that he had succeeded in substantiating his point.

With regard to the fact that the *Mahάwaṇsa*, or the earlier part of it, including the period of Wijayo's landing, must be taken with the accompanying fact that it was not written until some 800 or 900 years after, this was the case with many histories, and it must be borne in mind that the events were not written from memory, but from documents in existence, some of which they had amongst them now in the *ṭikás* or commentaries. There were the original inscriptions of the buildings and tanks at that time also ; this must not be lost sight of, for the ruins of many of these still existed. The strong confirmation which Mr. Turnour had given of the authenticity of the *Mahάwaṇsa* was in the following expression of that eminent translator's opinion : "that the accuracy of the work was established by every evidence which could contribute to verify the annals of any country."

There was one argument which he had not included in his Paper, as the first mention of it at a date somewhat subsequent to the period he had dealt with on the present occasion. It was that all the endowments and gifts to temples, viháras, and religious and secular institutions generally were made in rice lands, and the villages appertaining thereto, this cultivation apparently forming the sole permanent and constant source of income.

Mr. HENRY BOIS proposed a cordial vote of thanks to Mr. Wall—which he was sure would be carried with acclamation for his very interesting Paper.

The motion was unanimously agreed to, and the proceedings terminated.

General Meeting.

September 30, 1891.

Present:

The Lord Bishop of Colombo, President, in the Chair.

Mr. A. M. Ferguson, C.M.G. | Mr. F. C. Roles.
Mr. D. W. Ferguson, M.R.A.S. | Mr. W. N. S. Asserappa.

Mr. E. S. W. Senáthi Raja, M.R.A.S., &c., Honorary Secretary.
Mr. Gerard A. Joseph, Assistant Secretary.

Visitors: one lady and thirteen gentlemen.

Business.

1. Read and confirmed Minutes of the General Meeting held on June 9, 1891.

2. The Honorary Secretary laid on the table a large number of new books received. He stated that, besides several books purchased and others received in the shape of donations from the Secretary of State in Council for India and from the Ceylon Government, many new exchanges had been made, the most notable among which were a complete set of publications of the Royal Society of New South Wales (fifteen volumes); a complete set, numbering about thirty volumes, from Les Memoires de la Societe Zoologique de France; Smithsonian Reports of the U. S. Government, and the publications of the Geological Survey.

3. The Assistant Secretary read a Paper by Mr. Frederick Lewis on—

NOTES ON EGGS AND NESTS OF *BRACHYPTERNUS CEYLONUS AND TOCKUS GINGALENSIS.*

By F. Lewis, Esq.

In his magnificent work, "The Birds of Ceylon," Major Legge says on the subject of the nesting of the red woodpecker (vol. I., p. 204): "In the south of Ceylon the red woodpecker breeds from February until June, and not unfrequently nests in the trunk of a dead cocoanut tree, cutting a round entrance and excavating the decaying part of the tree for some distance below it. I have never been able to procure the eggs, although the bird is so common."

During April this year, while engaged in inspecting forest lots in the village of Mádampe, in the Aṭakalan Kóralé of the

Province of Sabaragamuwa, I had the good fortune to be able to watch the nesting of a pair of these woodpeckers. The nest was situated in the trunk of a dead *del* tree, at a height of about 20 ft. from the ground. The opening into the nest faced about south, and entered the stem to a depth of 4½ in., when its course was directed at right angles downwards to about 20 in. below the level of the entrance. The hole made was nearly circular throughout its entire distance, widening slightly as it became deeper. The bottom of the nest upon which the eggs were placed was covered with wood chips, evidently part of the *débris* formed in excavating the passage and hollowing out wood for the nest.

The eggs were four in number, of a pure white colour, and measured as follows: 1·08 in. by ·76 in. to 1·10 in. by ·77 in., and in shape are very nearly elliptical.

Both birds were constantly in charge, so to speak, of the nest, but upon my taking the eggs they appeared to abandon the spot altogether, for though I often visited the tree afterwards I saw neither one or other of these woodpeckers in the neighbourhood.

I was also fortunate enough to get this year the egg of the Ceylon hornbill, the nest having been found by Mr. G. W. Jenkins of "Carney" estate, in Gilimalé, from whom I obtained the following interesting particulars:—The nest was found on March 10 in an *alubo* tree, placed about 30 ft. from the ground. The female, which Mr. Jenkins also sent me with the egg, was "mudded" into the nest, the aperture having been reduced from 8½ in. to 3 in. in diameter, or a thickness of 2¾ in. averagely. The nest inside the tree measured 18 in. by 12 in., *lined* over the bottom with small sticks and twigs. The eggs were two in number, but being in an advanced stage towards hatching, one was unfortunately broken in cleaning. The other measures 1·80 in. by 1·30 in., making a fairly broad oval in shape. In colour the egg is pale white, free of any gloss, and chalky in texture, almost rough to the touch over the "broad" end. The shell is thick, and of a darker colour inside than out.

The female, who was imprisoned over her eggs, did not appear to be in a particularly emaciated condition, having been probably fed by her mate during the period of incubation. It may be worthy of note, however, to remark that the entire plumage of the bird appeared to be thicker and softer than when the bird is not breeding. This may be due to the enforced repose of the bird, or possibly a development at this particular stage of the creature's existence that is necessary for the preservation of the offspring.

I believe it is generally considered that the Ceylon hornbill is strictly frugivorous in its feeding, but I may here record that in dissecting an adult bird I found the bones, head, and bill of a sun-bird *(Cinnyris Zeylonicus)*, besides the wing-cases of some beetles that were too crushed to be distinguishable.

I have not been able to gather any information from natives relative to the nesting habits of *Tockus Gingalensis* beyond the very vague statement that they build in holes in trees.

Mr. AMYRALD HALY (Director, Colombo Museum), after directing attention to the collection of specimens at the end of the room, which had been lettered and labelled for the occasion, proceeded to read his Paper on—

A NEW METHOD OF PRESERVING AND MOUNTING ZOOLOGICAL SPECIMENS.

THIS Paper ought, perhaps, to be confined to reading a simple recipe, which would only occupy your attention a minute or two ; but in these days, in which the development of everything is so carefully studied from fans and lawn tennis bats to the nebulæ, I have thought that perhaps a short history of how the results exhibited in this room to-night have been arrived at might not be entirely devoid of interest, although of an excessively technical character. The plot of my story may be summed up in carbolic acid—carbolic acid as a failure and carbolic acid as a success.

On taking charge of the Museum in 1875, I had not the slightest doubt about the success of carbolic acid, and expected at once to be able to have a good show, easily and inexpensively prepared, of all our reptiles and fish. My collection of English fish in London had been kept in a covered zinc pail in a solution of 1 in 400, and although the fish of northern seas have, as a rule, so little colour that I had not gained much knowledge on that point, there was no doubt about the preservation of the animals themselves. I was very soon undeceived. A few experiments on the common fish and lizards of the Cinnamon Gardens showed that solutions of carbolic acid in water do not act in Colombo as preservatives at all, whatever the strength employed. Such an experience ought to have warned me not to cry before I was out of the wood ; but in 1878 I reported a great success to Government by first employing alcohol for a short time, and then removing the specimens to a solution of carbolic acid and nitrate of potassium.

I may as well mention at this point that any form of the substances known commonly as salts, whether as poisonous, as corrosive sublimate, or as harmless as alum, are all alike destructive in this climate to any specimens prepared by them. One of the most extraordinary instances of this was in a very fine skate most beautifully mounted for the Museum by the American taxidermist, Mr. Hornaday.

The skin had been brought in brine from Jaffna, and soon after it was exhibited the fish began to give trouble. It was carbolicised, it was varnished, it was dried in the sun, it was painted ; but it slowly dissolved before our eyes, exactly as the Cheshire cat did before Alice's, till nothing was left but its grin, represented by the curious dental plates on my office table ; but even these broke up at last. I need scarcely say that whenever I saw any solutions described as being used by other naturalists, I tried them also ; they were all alike—absolute and complete failures. The only approach to success was made by first preparing the specimens by arsenic paste,

and then mounting in kerosine oil. This was, as we shall presently see, what is called burning, in the game of hide and seek. A row of fish prepared in this way was exhibited, and preserved their form and colours beautifully for about six months, until one morning I found them nearly all broken up, and nothing left but a precipitate of muscle and bone at the bottom of the bottles. I came unwillingly to the conclusion that there was no means known, or likely to be discovered, that would preserve animals with a natural look about them, and that I should have to content myself with ordinary museum spirit specimens. There was one branch of the animal kingdom, however, I had always been very anxious to make a good show of, and that was spiders. I naturally looked to microscopical preparations to solve that question, and amongst them tried an old and long abandoned one : gum and glycerine. This had been given up because of the great difficulties experienced with the air bubbles which formed so abundantly in it ; but that did not matter to me. There was something about this mixture that strongly attracted my attention. Its action was unlike anything I had seen before, and I tried our beautiful little gold and red spotted fish in it, so abundant in the Colombo lake, and which are always my first test for the colour-keeping properties of any preservative. I found these little fish become semi-transparent and as hard as glass, and that their colours seemed as though burnt in.

My health having broken down I was obliged to leave for England for a year ; but I left behind me two rows of fish prepared in this way, one mounted in kerosine the other in glycerine, with strict orders that they should not be touched till my return. I found twelve months afterwards that the row in kerosine had broken up ; but those in glycerine were as perfect as the day I left. Specimen **A** is one of them, mounted in October, 1884. It is exactly the same as on the day it was put up. The first trouble was the enormous expense of the process. However, I overcame this to a certain extent by filling up the bottles with lead vessels painted white. You will see that all the fish bottles are

furnished with a lead or tin vessel. This saved glycerine; but it was the gum that was so costly, on account of the troubles in the Soudan. To economise as much as possible, the fish were first dehydrated in spirit, so that the gum and glycerine could be used over and over again. **B** is another specimen of a very beautifully coloured wrasse. The spots ought to be emerald green and the bands on the head violet. I have no doubt they would be, but I see by the label that it was not placed at once in pure glycerine, but seems to have been experimented with, how I do not recollect. I suppose, seeing the colour fading, it was changed to pure glycerine, but too late to save the more delicate tints. **C** is a star fish prepared by the same process some years ago. But here the usefulness of this process ends. Only very scaly fish, such as sea perches and wrasses, and a few echinoderms, can be prepared in this way. Ordinary fish, snakes, and frogs are withered up by it out of all recognition, and rendered as hard as iron. Was there any possibility of rendering the specific gravity of the gum and glycerine less? This was a question to which I devoted myself for a long time. No additions of watery solutions of any substances were of avail. At last I found that by gently mixing with weak spirit, briskly stirring all the time, that the gum, at first precipitated in flocculent masses, was re-dissolved, and that in that way solutions of almost any specific gravity could be obtained. **D** is an extremely rare frog, presented by Mr. Green, prepared and mounted in 1887 in gum and glycerine reduced by spirit to the same specific gravity as milk. But it is only very small specimens that can be mounted in this way, the medium being too opaque for any larger bottles, nor is it a good mounting medium even for them. The specimen exhibited is in a very soft state. I could not allow it to be handled, and hence it is useless for scientific examination. The delicate violet tint of the large blotches on the back, is, however, well preserved. If we attempt to mount specimens preserved in this way in pure glycerine, they are shrivelled up quite or almost as badly as if preserved with

the full strength of the gum and glycerine mixture. Many attempts were made to reduce the specific gravity of the glycerine. It may be asked, Why not have tried spirit? The answer is that some of my very first experiments in this Colony were with mixtures of glycerine and spirit. They are most powerful preservatives, and have the inestimable advantage in this hot climate of not evaporating, or at least not perceptibly; but they are absolutely destructive to all colour, bleaching the specimens with great rapidity. If watery solutions of salts or acids are used to reduce the specific gravity, a grand crop of fungus springs up at once. The only successful chemical was chloral, but it was soon found that light colours faded in watery solutions almost as soon as in alcoholic preparations. **E** is an example of a chloralised glycerine solution of about the specific gravity of milk, three years old; but it is expensive, and has no particular advantage except that it does not evaporate. My next experiments were solutions of gelatine in spirit. This is a very good preservative, but it does not keep bright colours. There is, perhaps, nothing better for frogs, all the delicate folds and glandular lines so important in identifying the species of this very difficult class of animals being preserved as in life. The mixture is made by soaking a packet of Nelson's gelatine in a pint of cold water for ten or twenty minutes, which is sufficient in this climate. Dissolving it by a gentle heat, it is then carefully stirred up with sufficient cold-proof spirit; the mixture should measure about 40 degrees below proof. **F** is a specimen of a young example of a very rare species of frog prepared in this medium, and mounted in chloralised glycerine. **G** is another example of a moderately sized frog, mounted in weak spirit, which is a better mounting medium. We have now two processes—one a splendid colour preserver of very limited use, the other an excellent preservative for very delicate objects, but not a preserver of any bright colour, although for dark tints it does very well. I now come to a very difficult subject: What is the action of the gum and

glycerine? I have long thought, and even reported in one of my Administration Reports, that the gum was the colour preserver, and that the glycerine acted first by dehydrating the animal and then by excluding air and water. I was led to this conclusion by the fact that the addition of water destroyed the colours, as I imagined, by again extracting the gum from the tissues. But I am now convinced this is not the case: the action of the gum is to harden the tissues against the softening influence of the glycerine; the real colour preserver is the glycerine, and it preserves because it excludes air and water.

Amongst some fish presented a great many years ago by Mr. H. C. P. Bell, C.C.S., was a specimen of a red sea perch (specimen **H**) in arrack, which had a bit of its bright red colour left where it was tightly pressed against the glass. This specimen had always had a great fascination for me, as it is a species in which the colour fades in a few hours. The idea of finding some process by which animals would be shut up in some kind of solid led me to try hardened Canada balsam. **J** is a Telyphonus, mounted in a solid glass made by evaporating Canada balsam to dryness and then re-melting it, and pouring it over the animal. The heat, however, is too great to make it an available process, and the exhibited specimens are the only successes I ever obtained. It was prepared in 1883. Now the fact is the glycerine, by excluding air and water, does act as a solid glass, and the only influence at work to bleach the specimen is light, which, curious to say, as the exhibited specimens show, does not seem to have much effect. **A** has been exposed to the full influence of a tropical light ever since 1884. Reflecting on this action it occurred to me, if the exclusion of air and moisture is the great ideal to aim at, could not some substance of a lighter specific gravity than glycerine be found? Why not some kind of oil? and of course in Ceylon cocoanut oil first suggested itself. But cocoanut oil, far from being likely to be a preservative, would require preserving itself. How was this to be done? Would

carbolic acid mix with it? I found on experimenting that, carbolic acid mixed with it in all proportions. There was of course, no idea of using this as a preservative, the specimens must be first prepared. Very fluid arsenic paste was used for silvery fish with some success, and reduced gum and glycerine and gelatine—of which **K** is an example—was also tried; but from the very first it proved a very refractory mounting medium. It was very difficult to get a sufficiently white oil to begin with, and when I did, it always had a strong tendency to discolour. Time has proved that I need not have troubled myself: it cannot be used as a mounting medium. Mixtures of carbolic acid and glycerine, or cocoanut oil, attain a deep colour in time, irrespective of any animal matter in them. **L** shows the action in the case of glycerine; **M** in the case of oil. You will see in this latter case that the toad is in splendid preservation, and the fluid bright and clear, but the colour is very objectionable. Whole cases filled with bottles of this tint would be very ugly, although, if the animals and their colour were well preserved, they might perhaps be more instructive than ordinary specimens. There was, however, another difficulty: a very fine cobra, well hardened in spirit after some months, broke down from no apparent cause. It was also found impossible to get a common bloodsucker mounted in this medium. Neither gum and glycerine nor strong spirit, nor arsenic paste, nor anything else would keep them. In fact, the medium appeared either not to be safe or not universally applicable. In order to study it and learn what its action really was, I preserved a bloodsucker in it direct, without previous preparation of any kind, and found that I had a preservative of form as good as any known, and of colour as good as gum and glycerine itself. In this case the carbolic acid is either the dehydrator or, perhaps, combines with the tissues and preserves them, whilst the oil acts as the atmospheric excluder; and now you will see why difficult subjects such as cobras and bloodsuckers, previously prepared, broke down. The tissues had absorbed from the alcohol or arsenic

paste, or reduced gum and glycerine, a large proportion of water, in addition to that naturally contained in them, and consequently more than the carbolic acid could extract or combine with, the result being that they had an atmosphere, so to speak, of their own, which finally led to their more or less speedy decay. Here is then a splendid medium for the zoologist, especially in a hot climate. He is furnished with a powerful and easily used preservative both for form and colour which does not evaporate. **N**, the leg of a fly laid on a glass slide in a drop of oil, and just simply covered by an ordinary microscopic glass cover, has remained in the same state for eighteen months. I need not say what a boon this will be to the microscopist, who, whilst wishing to study some subject, does not wish to mount his specimens permanently. But with all these advantages it is of little use for public exhibition, and I need scarcely say this was a great disappointment to me.

The spider question solved my difficulties (at least, I hope so) once more. I noticed how exceedingly hard some spiders had become in the oil, when it occurred to me that specimens that had become so firm would resist the dehydrating action of glycerine ; and that if spiders would, anything would. The experiment was at once tried—the large rat snake, seven feet long, some frogs, and the fish, coloured and uncoloured, will show you with what success.

The oil is also an admirable preservative for large fish skins that can be mounted afterwards. They require no varnishing, and retain much of their lustre, and a large sea perch is exhibited prepared in this way. I have now merely to read the recipe. Add carbolic acid to cocoanut oil till the oil marks 10 to 20 degrees below proof on an hydrometer. The more acid the more powerful the dehydrating effect, and judgment must be used. In this climate it is best, although not absolutely necessary, to remove the entrails. Place the specimen, carefully wrapped in rag, in plenty of this preparation. If wanted to mount for show, drain off the superfluous oil and mount in glycerine.

Mr. A. M. Ferguson said he felt he was speaking for all present when he said they had listened with extreme interest to Mr. Haly's Paper. They had received a more vivid idea than they had had before of the vapour bath in which they lived. They had illustrations of the effect of the atmosphere by the backs of their books coming off, and the vegetable growth on their boots and shoes. The result of Mr. Haly's great research which he had just given to them would be very valuable to others in preparing and preserving specimens.

It had struck him, while the Paper was being read, and they were being told about the keeping qualities of birds and butterflies and moths, and other things, that a former Paper by Mr. Haly, though read to them a long time ago, had never been published. It was one that dealt with the snakes of Ceylon* in a very exhaustive way, and was numerously illustrated. He should like to ask what had become of it, as it was a work of great interest and value. He had been reading recently in an article about British Guiana of the process of growth of the rattle-plates as formed in the rattle-snake; and this also made him feel that Mr. Haly's Paper would be of great use and should be published. Meanwhile they felt very much indebted to him for the Paper they had heard read that night.

Mr. Haly, in answer to Mr. Ferguson, said that after the previous Paper referred to had been read and had been sent to the Government Printer, it was found that he had not the type necessary to represent some of the signs. These were not algebraical, but such as b^1, b^2. Since that time the Government Printer had sent to England and procured the type required.

The delay, however, had been useful, because a work had since been published by Dr. Boulenger of the British Museum on the fauna of India, in which much of the nomenclature and naming of the head-sheaths of the snakes had been changed. He would now, therefore, be able to revise his Paper, and bring it up to the most modern conclusions in the matter, which would render it of more value. He was at the present time engaged in doing this; and the Paper, he believed, would be ready for the Printer in two or three weeks.

5. Mr. D. W. Ferguson read the following translation prepared by him of—

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* Essay on the Construction of Zoological Tables, with a Tabular Diagnosis of the Snakes of Ceylon.

RIBEIRO'S ACCOUNT OF THE SIEGE OF COLOMBO IN 1655-56.

INTRODUCTION.

OF the siege of Colombo by the Dutch in 1655-56 we have no less than four independent accounts by eye-witnesses, most of whom took an active part in the stirring events on one side or the other. Of these, two are written from the Dutch point of view, and two from that of the Portuguese. Of the former, that by Baldæus—who, as one of the chaplains to the Dutch forces, had exceptional means of gaining reliable information—is the fuller; and it is also the longest of all the four. This is contained in chapters XXIV.-XXXVIII. of his work on Ceylon, published at Amsterdam in Dutch and German in 1672, an English translation of which appeared in vol. III. of Churchill's Collection of Voyages and Travels (London, 1704). The second account is by Saar, a Nuremberger, who served in the Dutch army, and is contained in chapters XII. and XIII. of his *Ost-Indianische Funfzehenjährige Kriegs-Dienst*, published at Nuremberg in 1662. The portions of this work relating to Ceylon were translated for this Society by Mr. Ph. Freudenberg, and the account of the siege of Colombo was read at a General Meeting of the Society held on January 29, 1885. Mr. Freudenberg's translation has not yet been published in the Society's Journal.* Of the Portuguese narratives of the siege, the first is also contained in Baldæus's work. It is given at the end of the Dutch edition; the author explaining that after his book had been printed off this account was placed in his hands by Matheus van den Broek, who had formerly been a Member of the Council of the Indies, and was at that time Governor of the Dutch East India Company. Recognising the value of the narrative, Baldæus had it translated into

* The delay is due to various causes. The translation will appear in the Journal for 1890, now in the press.—*Hon. Sec.*

Dutch, as he says, "word for word." In the German edition of Baldæus this narrative is inserted after chapter XXXIX., and in the English translation (which was made from the German version) the same order is followed. This account, which is, perhaps, the most graphic of all the four, was, as stated at the end, compiled from the official diary and from other reliable written and verbal sources for presentation to the King of Portugal. Baldæus has added to the value and interest of the narrative by inserting a plan of Colombo showing the positions occupied by the besieging force. The fourth account of the siege of Colombo is by Captain João Ribeiro, and is contained in chapters XXIII.–XXV. of Book II. of his *Fatalidade Historica da Ilha de Ceilão*. This interesting narration has never been translated, for the version by Le Grand, which Lee translated into English, is simply a travesty of Ribeiro's account. As I have shown in my Paper on Ribeiro and Le Grand, printed in this Society's Journal (No. 36, vol. X., 1888), the copyist from whose manuscript Le Grand translated compressed the three chapters into one, and thereby made utter nonsense of a large part of the narrative.* I have therefore translated Ribeiro's account of the siege and the subsequent rendition of Colombo by the Portuguese, as given in the printed edition of 1836, published by the Lisbon Academia Real das Sciencias. The style is not polished ; but then it must be remembered that the writer was a soldier, who, as he reminds the king in his dedicatory epistle, was more accustomed to the sword than to the pen. I have therefore made the translation as literal as possible. In order that the condition of Colombo at the time of its siege may be better understood, I here translate Ribeiro's description of the city, as given in chapter XII. of Book I. of his work :—

"Columbo, from being a small stockade (*tranqueira*) formed of wood, came to be a fine city, fortified with twelve

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* This can be seen by omitting the portions of the following translation which are enclosed within thick brackets, and reading what remains as a connected narrative.

bastions: hexagonal, in the old style, certainly, and with little internal space, but placed where it was convenient. The walls were of simple mud (*taipa*), this being sufficient against the natives, with a moat and a ditch on one side and the other, which ended in a lake that on the landward side encircled a third of the city. There were two hundred and thirty-seven pieces of artillery mounted, of three kinds, from ten to thirty-eight* pounds. It was situated on a bay capable of containing many small vessels, and was exposed to the north. The circumvallation occupied one thousand three hundred paces. On the point of the Reef, which is on the south, was erected a large breastwork† (*couraça*) with the heaviest artillery, called Santa Cruz. This commanded and defended the whole bay; thence the city runs open towards the south, this part being called Galvoca, which, on account of the reef, has no need of a wall; at the end of this, on the sea-side, is a bastion, and at its root commences the ditch, which extends with a modern wall and another bastion, which are called those of Mapané,‡ where is a gate with a drawbridge, and this same ditch runs along, and the wall, until it ends in the lake, terminating in the bastion of S. Gregorio. From the sea to this point was the best fortification that the city had, and not inferior to that of the said lake, which encircled it for a distance of four hundred paces. The latter has a circumference of more than two leagues, and breeds a great quantity of crocodiles. At a hundred paces beyond the bastion referred to is another, besides a large house and powder-mill, and by means of the water extending from the

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* Le Grand has "thirty-six."

† Le Grand has "une espece d'Eperon," which Lee translates "a small battery." This *couraça* was built by Constantino de Sá in 1625.

‡ In Le Grand's plan of Colombo this name is wrongly given as "Mapassa." As to the meaning of Mapané Mr. L. C. Wijesinha writes to me:—"I think there is no mistake that the first syllable *Ma* is an abbreviation of *maha*; *pane*, I presume, means *piṭiya*, a plain; so that the name is significant, meaning the *great plain*. I believe the terminations *piṭiya*, *áne*, *máne*, *pane*, in the names of villages, are synonyms, and mean an avenue, plain, &c. I was not aware that the Galle Face was called *Mapane*. I believe it is now called, or used to be called, *Polatupiṭṭaniya*."

said lake every day two *quintals* were manufactured.* Thence runs a brook, which traverses the city in the midst, with two bridges for its traffic; thus the wall runs down skirting the lake, until it ends at the bastion of S. Hieronimo, where it terminates, in the middle of this portion being the bastion of Madre de Deos.† Beyond is the gate, which is called *da Rainha* [the Queen's], and the bastion of S. Sebastião, at the root of which commences the ditch, which extends along the foot of the bastion of Santo Estevão, and ends at the gate and bastion of S. João,‡ with another drawbridge, which is where the city ends to the north, and from it a strong stockade of sharp stakes along the shore to the sea. From here the bay runs to where stands a handsome breast-work (*couraça*) in front of the College of the Company [of Jesuits]. Further on the bastion of the custom-house; thus the wall runsalong until it ends with the Santa Cruz breast-work§ (*couraça*). The portion of the city which is divided from the part on the south by the brook that comes from the powder-mill is the strongest thereof, by reason of a hill that is in the midst,‖ where stood the convent of St. Augustine, in the garden of which we had a large vaulted house built, in which were stored one hundred and twenty large jars of powder, in which it kept wonderfully, without need of renewal. We had two other houses besides, not of so great a size, but also vaulted: one in the house of St. Francis, the other in that of the Capuchins, likewise filled with jars of powder. There were in this city nine hundred families of noble citizens, and more than one thousand five hundred

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* This powder-mill was erected by Constantino de Sá in 1625. The Dutch continued the manufacture of gunpowder, but worked the mill by wind. Saar in his narrative relates how he and a number of other Dutch prisoners were forced by the Portuguese to work in this mill.

† This would seem to mean that the bastion of Madre de Deos was on the lake-wall; but as a fact this bastion was on the eastern wall, between the bastions of S. Hieronimo and S. Sebastião. Le Grand puts the bastion of S. Hieronimo after Madre de Deos, the Porta da Rainha, and S. Sebastião.

‡ Lee turns these into the gate and bastion of St. Thomas.

§ Le Grand translates *couraça* by "esplanade."

‖ Le Grand renders this: "and this place is not the least strong of the southern part of the town," which entirely reverses Ribeiro's statement.

various officials and merchants, all within the walls; two parishes, that of the Mother Church and that of St. Lawrence; five convents of monks, that of St. Francis,* St. Dominick, St. Augustine, the Capuchins, and the College of the Fathers of the Company, with classes in Latin and philosophy; the house of the Santa Misericordia, a royal hospital; and outside the walls seven parishes. All the inhabitants were enrolled in companies, the Portuguese in some and the natives in others; all took their turns as guards at the bastions and posts with their arms, with which they were expert, and well ammunitioned. When a company of Portuguese went on guard, if there were eighty or ninety men, they made it two hundred, all armed, because the servants and followers on these occasions accompanied their masters and lords."

Saar gives the following description of Colombo at the time of the siege :—

"The city is prettily situated on a plain, and is quite open on the sea side. Large ships cannot enter the harbour, and must remain lying half a league therefrom. On its right side it is provided with a large water-fort† called *S. Croix*, on which, when we come before it, were sixteen metal cannon, which could command the sea and the harbour. On the shore on the right hand,‡ before one came into the city, was the gate called the Elephant, over against which stood the *Vice Roy's* residence. Along the shore there it was enclosed by a low wall, where was also a small bastion by name *S. Vincenz*, not far from which was a small water-port, and near it the bastion *Allegresse*. Further along, on the shore, stood the bastion of *S. Joan*, built high with stones, and the last bastion on the harbour, which it could half flanker and half also the land, near which also a large gateway led into

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* Le Grand says "of the Cordeliers."

† In the original *Wasserpasz*; in Dutch *Waterpas*. (See Daalmans' description of Colombo in C. B. R. A. S. Journal, No. 35, vol. X., 1887, p. 163.)

‡ Saar is describing the city as viewed from the harbour, and he makes the circuit from right to left; Ribeiro takes the opposite direction.

the city. On the land side, again, was erected a large bastion entitled *S. Stephan*, on which likewise stood sixteen metal cannon. After this a small bastion called *S. Sebastian*, near which again a large gate, the King's gate,* led into the city, and not far therefrom was another bastion named *Madre Des*, or the Mother of God, on all of which bastions, round about the city, were bells, with which when anything happened it was speedily made known in all parts. From the bastion of *Madre Des* there was a large brook near the house *Hieronymus*, where also a battery was thrown up, and two cannon mounted thereon loaded with grape, together with a small bastion called *Capoccin*, from the Capuchin monastery situated near it. Further on stood the powder-house, and near it the great bastion of *Hieronymus*, and again a large gateway by name *Mapan*, arched above, which also had its cannon on it; lastly, the bastion *S. Augustin*, also so called from the Augustine monastery adjoining it. Where the ditch has an end was a stone breastwork, by name *S. Jago*, about an eighty-foot long, extending as far as a rock, on which, as at *Pünte de Galle*, one can fly a flag. Outside the city were the monasteries; first, that called *Acqua di Lupo*†; second, the monastery of *S. Sebastian*, near it a small chapel; thirdly, at a mile's distance therefrom, the monastery of *Misericordia*."

If these descriptions are compared with each other, and with the plans of Colombo given by Baldæus and Le Grand, and the more elaborate one in Barretto de Ressende's *Librodo Estado da India Oriental*, 1646 (Sloane MS. No. 197 in the British Museum), a number of discrepancies will be observed, which, with our present knowledge, it is impossible to reconcile in every case. For instance, if we tabulate the

* This should be "the Queen's Gate," the Portuguese name being *Porta da Rainha*. By a most incomprehensible blunder Baldæus in his own narrative, and in his translation of the Portuguese diary, makes it "the gate of *Rajuha*."

† This represents the Portuguese *Agoa do Lobo* ("the wolf's pond"), which the Dutch adopted and adapted as *Wolvendaal* ("the wolves' dale"). The natives still call the Wolvendal church *Adilippu* or *Adirippu Palliya* (or *kovil*).

names of the twelve bastions as given by Ribeiro, Saar, and the Portuguese narrative in Baldæus, we arrive at the following result :—

Ribeiro.	*Saar.*	*Baldæus.*
Sta. Cruz	... S. Croix	... Holy Cross
Galvoca	... [Breastwork of S. Jago]	Galvoca
Mapané	... S. Augustin	... S. Augustijn
S. Gregorio	... Great bastion of Hieronymus	——*
[Unnamed]	... Capoccin	... [? Conceipçaon]
S. Hieronimo	... Battery near House of Hieronymus	... S. Hieronymus
Madre de Deos	... Madre Des	... Madre de Deos
S. Sebastião	... S. Sebastian	... S. Sebastiaan
S. Estevão	... S. Stephan	... ——*
S. João	... S. Joan	... S. Jan
Couraça in front of Jesuits' College	... Allegresse	... Couraça of S. Francisco Xavier
Customhouse bastion	... S. Vincenz	... ——*

In comparison with the writers of the other three accounts of the siege of Colombo, Ribeiro laboured under the serious disadvantage of not committing his narrative to paper until nineteen years after the events recorded had taken place. Hence it cannot be wondered at that his account is not so detailed as those of Baldæus and the anonymous Portuguese writer. His narrative, however, is of great value and interest, several facts being recorded therein which are not found in the other descriptions.

From the four narratives above mentioned, a detailed account of the siege of Colombo in 1655–56 might be compiled. An essay in this direction was made some years ago by Mr. Alfred Clark of the Forest Department, and was published as a supplement to the *Ceylon Observer* of April 28, 1884; but unfortunately Mr. Clark had to depend for his information chiefly on Le Grand's caricature of Ribeiro and the faulty English translation of Baldæus: hence this

* The other three bastions mentioned are S. Anthonio, S. Jacob, and Laurens; but I cannot locate these. Baldæus also speaks of the bastions of Clergos and S. Philippo, near that of S. Sebastian.

generally excellent summary is marred by a number of errors in names of places, &c. For any future attempt of this kind I hope that the following translation will be found of service.

In the two chapters preceding those which I have translated, Ribeiro records the arrival at Galle in September, 1655, of General Hulft's fleet; the siege of the fort at Kalutara and its capitulation on October 14; the disastrous defeat of the Portuguese under Gaspar Figueira on the seashore at Moratuwa three days later; the retreat of the survivors to Colombo; and the advance of the victorious Hollanders on the doomed city.*

Chapter XXIII.†

Of the Siege which the Hollanders laid to the City of Colombo, and an Assault which they made on it.

That day‡ the enemy encamped in N. Senhora da Vida, [1] § a post which lay at little more than a cannon shot from the city. The Captain-General on the following day, the 18th, formed into companies those who had escaped from the battle; and seeing that the bastion of S. João was the one in closest proximity to the enemy, and the space therein very limited, [owing to its being old-fashioned, and octagonal, and that it was not capable of resisting the batteries,] [2] he ordered it to be overlaid with earth and fascines on the outer part, [3] and in order that the enemy might not hinder this work, they having a garrison [4] in the houses that stood in S. Thomé [[5] where they had made a commencement at once, to this end he ordered a captain, who was stationed at the same bastion, being in command of five companies, to garrison it, and the gate of the city and the casemate. These occupied the seashore which lay between the enemy

* For a translation of chapter XXVI., describing the siege and capitulation of Mannár and Jaffna in 1658, see *Ceylon Literary Register*, vol. V., p. 202.

† This and the two following chapters form chapter XXI. in Le Grand's translation, with the heading "Siege of Colombo."

‡ October 17, 1655.

§ The small figures refer to "Notes" at page 104 *et seq.*

and the fortress, where the soldiers made pits in the sand, and from these kept up such volleys, that not only were the enemy unable to prevent their overlaying the bastion, but they harassed them in the battery,] in which relief work they were engaged for five days, in which time it was overlaid, [as was intended. Daylight of the 26th saw the battery finished, and in it five demi-cannon and a 38-pounder, with which they battered us the whole of that day, whereby we suffered some loss in that same bastion, more from the ruins of the parapets, which were of unhewn stone, than from the balls of the enemy. And in order as speedily as possible to return their battering, we formed a platform on that part of the seashore at the foot of the bastion of S. João, a very convenient position, in which we placed two demi-cannon and also a 38-pounder, with which we knocked down the houses that were close to their battery, where they had their quarters, and obliged them to protect themselves with an entrenchment. The firing from one and the other side continued for some days, on one of which both the 38-pounders were fired at the same time, and the balls struck each other midway: that of the enemy turned its course backwards, and entered the mouth of its own cannon, and knocked it to pieces. At the beginning of November they had made good progress with the approach, an affair of thirty paces, where they set up another battery with six 24-pounders and two "borers," [6] and with both they continued to batter away vigorously until the 12th. Their General Giraldo Holfot, seeing that with such slow progress he would not for a long time attain to the end of his hopes, determined that on the next day an assault should be made on the city, and disposed his forces in the following manner. [7]

He ordered that two strong ships [8] should be got ready, provided with good infantry, and that these at the time that the assault was being made on land should enter the bay, and should set to work to batter the *Couraça* of Santa Cruz, and that in the thick of the conflict they should, by means of their boats, seize that position, which was very convenient

for them, and as it was situated overlooking the sea on a reef, appeared to them to be without a garrison. He also caused to be placed on the lake inside a number of small boats, [9] with which he had come provided for this purpose. That night [10] he gave orders for a thousand foot soldiers to cross the bridge which spans an arm of the same lake, which forms the entrance to the road that leads to the Porta da Rainha; and he placed two thousand near his batteries, in order that a thousand of them might go along the seashore and get across the stockade, of whom fifty were to go to the casemate gate of S. João and platform; the other fifty to go to a *couraça* [11] on the seashore, in front of the College of the Company; and the other thousand to attack the bastion of S. João and the stretch of wall which runs thence to that of S. Estevão. These men were not got ready so secretly that it was not notorious to the whole city that they intended to make an assault, from the positions in which we discovered these bodies of men ranged in the morning, and thus we had the opportunity of preparing to receive them.]

It chanced that at 8 in the morning of the 13th [12] of November, 1655, the tide afforded them the opportunity of passing the stockade by the seashore. From one battery they gave a signal with three shots, and all at once they swarmed out all in order and very quietly, affording us the chance before they arrived of giving them two volleys. [13] [The ships had already set sail with a fresh breeze, making short tacks; and as soon as they saw the signal they turned their prows to the bay. One of them entered it, and cast anchor alongside of the *Couraça* of Santa Cruz; the other remained outside at a good distance in order to escape the danger. Each of the squadrons reached the position that had been assigned to it, and the only ones who did not succeed were the thousand who were coming to the bastion of S. João and the wall, as they came upon the ditch; however, having divided, the one part went to the bastion of S. Estevão, and the others going by the seashore lent a hand to the five hundred who had reached the platform and casemate which

extended along the portion of the wall that ran as far as the *couraça*. [14] They all set up the ladders and ascended them with great determination, in order to see if they could make themselves masters of any of those positions, throwing numbers of grenades; but everywhere they were beaten back by us, both sides fighting doggedly; and those whom we hurled from the ladders renewed the ascent with greater fury, not being frightened at the large number who fell dead by reason of the traverses and musketry; nor did the thousand who had gone to the Porta da Rainha and bastion of S. Sebastião work less hard. [15] The Captain-Major Gaspar Figueira was assisting in the defence of the Porta de S. João, and the casemate, where, in the midst of the conflict, he was informed that the enemy had entered the *couraça* of the seashore, and in order to cope with that danger he ordered a captain, in whom he had confidence, to go to its assistance. This he proceeded to do; and thinking that the soldiers would follow him, at the entrance he found only one who followed him, and that place deserted by the inhabitants who had been garrisoning it. The two attacked those of the enemy who had already entered, and made them, against their wills, jump back on to the seashore, opposing the rest who were entering; and the enemy, imagining that those who had come were more in number, threw in numbers of grenades, which set fire to the pots of gunpowder with which all the bastions were provided in large quantity, so that the captain did not escape being burnt. At this conflagration there hastened thither several soldiers and inhabitants of those who had deserted that post, whom the shame of seeing that two alone had driven the enemy out caused to return to the defence. At the same time a report got about that the enemy had entered into the city. This put everyone in great trepidation; no one, however, left his post, as all were busy in defending it.] Antonio de Mello de Castro had under his charge a hundred soldiers, and was with them in the middle of the fortress, [16] in order to hasten whithersoever necessity should require him. As soon as they told him

where the enemy was, in a very short time he was at that part [followed also by several inhabitants and a company of Topazes, and he came upon a squadron of three hundred who did not know whither they were to march, and only a monk [17] was opposing them.] They were at once surrounded by our men, and [of the three hundred, sixty-two were spared ;] the rest were put to the sword. [18] [These three hundred had entered by means of a low wall which enclosed the city near the lake, a quarter which neither had nor required a garrison, and they reached it in the boats which they had brought for that purpose. [19] At all the posts they were beaten back by our men with great valour; and the enemy, seeing the large number of men that they had lost, and at all points strong resistance, began to retire at midday, leaving the foot of the walls and the bastions covered with corpses. The ship [20] that had entered the bay set to work to batter the *couraça* of Santa Cruz, and was in a short time sent to the bottom by the latter, and several who had not lost their lives therein, thinking that they would escape in the pinnace; it was however sunk by a ball; and of all who were therein only the captain and two others were able to escape by swimming; the others came on shore. These were of service to us, as we got from them thirty-eight pieces of artillery, which were of use to us at several posts, and three casks of Canary wine, some barrels of meat, and a quantity of rigging of which we availed ourselves in the form of match-cord, so that our posts might have fire at all times.]

The enemy lost in this assault more than two thousand [21] of the best men that they had, and if our soldiers had not been newcomers [to the Island and consequently little versed in such occasions], not a Hollander would have been able to retire. [When in the midst of the combat a married woman heard that the *couraça* was entered by the enemy, such was her anguish that it forced her to seize a halberd, and resolutely she went to that post, and remained there as long as the enemy did not retire; and without doubt if they

had got in she would have acted the part of a well-trained soldier. She was married to an honoured citizen, by name Manoel de Sousa Bigodes, whom the gout rendered almost helpless.

We ordered the dead to be buried, and as there was a large number, pits were dug outside the wall, which held many wherever they were found, that they might not cause us any contagion. The enemy, after having retired, remained several days without making any movements, so that it seemed to us that they meant to retire; and there is no doubt that if we had not had to give them battle, in which we lost so many and such good men, and if we had had these wherewith to sally forth against them, not one would have escaped being put to the sword; but we were so few that we had not the garrison for the posts, and on this occasion we had ninety [22] killed and wounded. After ten days had passed in silence they re-commenced with the batteries and advanced with the approaches, where they set to work to form other new ones, there being six, all at the bastion of S. João, and some of them along the ditch, in which by night they placed a gallery, with the intention of mining the bastion by means of it; and though the darkness was certainly very great, they did not escape being observed, and incontinently some of our men leapt into the ditch and killed eighteen who were engaged in this work, and destroyed the gallery. In the morning we took care to make a dike in the same ditch, in which we placed a piece of six pounds to oppose any engine which the enemy might seek to place therein; and seeing that we had prevented what they had designed, they commenced advancing an approach towards the front of that same ditch, without our being able to hinder their carrying on this work by many and frequent assaults, which we made on them, even setting fire to them; and in order to prevent our doing this, and to defend those who were at work, they made three fortlets in that part; but withal we were in nowise neglectful, and resisted them in every way that was possible to us, on

account of the danger that threatened us.] In this struggle we lost many soldiers of great worth; and although we used all the energy, and [even more, that] our limited forces permitted us, we could not prevent their continuing the approach; [and on bringing it as far as the place where we destroyed their gallery, they threw such a quantity of earth into the ditch that they soon filled it up, having done which they broke down its wall, and began to mine below the earth, and made things so impossible for us that neither from the dike nor from the bastion of S. Estevão could we harm them.

Thirty paces in front of the Porta da Rainha they set up a battery of eight demi-cannon, with which in seven days they levelled the stretch of wall which ran therefrom to the bastion of S. Sebastião, and made such a clean sweep of the whole, that not a sign of a ruin remained, as all was built of *taipa*, like the rest which protected the city; for which cause everyone set to work to cover over the piece that ran from the bastion of S. João to that of S. Estevão with earth and palm-trees, a not unnecessary precaution, as that was where the enemy was making the most vigorous attacks; but in order not to leave the city defenceless at that part, we make a stockade of pointed wood, with ribands nailed at two places, and it was so well finished off, and so strong, that a wall was unnecessary, and the flanks which joined the gate and the foot of the bastion were guarded by four pedereros. The enemy had determined to make an assault at this point; however, the soldiers who frequently deserted from us dissuaded them from this intent.]

The whole time that this siege lasted they threw into the city a large quantity of bombs, [of an immense size, and in the house into which any fell the least that it did was to carry away the upper part, and leave it open, only the walls remaining; the uneasiness and horror that they caused being more than the deaths that resulted from them. There was another kind of bomb that they manufactured. These were much smaller, but covered with plenty of tow and inflam-

mable ingredients, and made in such a manner that in the lower part in the midst of the tow they carried from twenty to twenty-five barrels, like those of pistols, loaded to the muzzle with two balls; and putting these bombs into the mortars, they fired with such accuracy that on reaching the height of a fathom or a fathom and a half above us, those barrels went off on all sides, these same barrels doing as much harm as the balls, and finally the bomb exploded. With this device they killed several of our men. What did us most harm, and only the devil himself could have brought to light such an invention, was, that in place of bombs they filled the mortars with sharp-cornered flints, and large stones, and in the same manner and with the same elevation that they gave to the bombs they fired them, generally at night,] and with this [infernal] [23] device they killed a large number of our men, [who, as they did not carry muskets, not a person was safe, nor left his post, but each one simply took pains to commend himself to God, expecting sorrow as his lot; for with one mortar alone they killed seventeen of us at the bastion of S. Estevão. Following their example we brought out from a magazine in which it lay the mortar that D. Filippe Mascarenhas had ordered to be cast, and had taken to Negombo, with which we threw the coconuts into that fort, [24] and even though it was small, we did not fail with stones to cause them considerable loss of men, who were helping in the fortlets and batteries, not giving them an hour of rest the whole night; and they were in a continual state of uneasiness.] Out of the Island we could not venture, nor enter any boat, without being captured, [as the eighteen ships were anchored, and extended across the mouth of the bay; and when it was night, the pinnaces came and anchored nearer to the land, and in this form the smacks were arranged, which were followed by the launches which were already close to the shore; a half-moon being formed by the whole, and on the outside went the sloops well armed, forming a patrol, and at daybreak] all proceeded to cast anchor alongside the ships. [25]

Chapter XXIV.

Which continues the same subject of the siege.

As we could not prevent the enemy's continuing to mine beneath that rubbish which they had thrown into the ditch, that they might thereby mine the bastion of S. João, which was already so scarped that not half of its interior space remained, by reason of the many breaches which we had made in it to form parapets, and to repair those that the continuous firing of the batteries had ruined, for which reason we made with all haste at the foot of the same bastion a countermine, and through it we met: [26] [this work was of no little use for our defence on account of the impediment and hindrance that we caused to that at which they continued so industriously, depriving them of the hopes which they formed.] At the breach we fought with them obstinately during an afternoon; and as the passage that they had made through the earth was two fathoms in width, many hastened to the defence, of whom a large number were killed, [and as the breach which we had made was very small and dark, they could not do us harm. The only arms that could be used in this place were blunderbusses and pistols; and when it was night there was a cessation of the fray on one side and the other, and the enemy covered themselves with certain boards, which they had got in the forests, in which they had made loopholes. Our men with all haste dug a pit in the space between us and the enemy, in which we buried a large case of powder of the length of six spans, leaving a span and a half of the fuze connected with the vent above ground; and it was a miracle, the firing into that place being for a long time so continuous, that a spark did not blow it up Having done this, we enlarged the breach to such an extent as could contain a man when standing from the breast to the shoulders; and in order to have persons specially set apart for guarding it, the Captain-General ordered some *reformado* captains who had given good satisfaction to be called, to whom he said: that as that post was the one where there was most risk, it was not proper that they should trust in

any person whatsoever, but only in their own selves; and therefore he asked them to take upon themselves the defence thereof, on account of its great importance to the service of His Majesty, who would remunerate them for it with great rewards; and that only by such means would all be free from uneasiness, having such honoured gentlemen as defenders; because the most that that trouble and siege could last was a month, since in the following one (March), when the monsoon had set in, help would reach us.

Of those whom he chose for this occupation, eight accepted with great zeal and willingness. To each two it fell to take two watches in that post, one by day and the other by night, because there was only room for two persons to be there, and these separate. In the inner part of the interior space, and at the mouth of the countermine, was made a doorway, which scarcely allowed one man to pass; and when the two who were going to act as sentinels came to it, before entering they disarmed themselves of all their arms, because if they took them they would only serve as an embarrassment to them, and so each one took nothing but a blunderbuss; and when they entered the doorway they locked it with a key, and reported themselves to the captain commanding the bastion; the two walked that distance under the earth to a place where there was scarcely room for the body, and in such dense darkness that all reckoning was lost. When they had reached this on the left hand there was a cave, formed by the ruins of the bastion, whither one of the two ascended to the height of two spans, and placed himself under some planks which happened to be there, and which must have been used when the bastion was overlaid. In this post that sentinel remained, whilst the other proceeded further forward, a distance of two fathoms, which was where we had an encounter with the enemy, who protected themselves with the boards, there being between this sentinel and them only seven spans of earth, where was buried the case of powder. The enemy placed in that guard-post twenty-five carbineers, who usually played pranks with this sentinel;

for of the one who remained in the first post they had no knowledge; some of them indecent, and others more sensible, according to the humours that moved them; oftentimes they threw fruit, tobacco, and after similar things; however, generally there was one with the muzzle of his carbine placed in one of the loopholes that were in the boards, and being careless of our sentinels, several were killed, serving as a warning to those more cautious, so that they might be aware that as soon as they approached the dark opening they would certainly be promptly fired upon. In this place, where this sentinel was, there was only room for a man to stand sideways, and with his right eye he had to watch the loopholes of the planks. His other companion, who remained at the first post, acted the sentinel lying face downwards on the ground, not being able to do otherwise, and kept a lookout between those boards, this place being above the enemy. The orders that they had were, that if the enemy advanced by that way on the bastion, they were to discharge their blunderbusses upon them in such a manner that the fire would strike the touch-hole of the case of powder. This post was so dreadful and dangerous, that even those of greater courage did not fail to be dismayed, and the stoutest heart also became fearful; not only on account of the great danger, but also from seeing themselves cooped in; and most of the nights they were not relieved, an intolerable task. Wherefore some of these captains of whom there was a good opinion, through not being able to endure it abandoned that post and deserted from it to the enemy; by which it became so dangerous, that the one did not trust the other, through fear of being killed by their companions or betrayed to the enemy; for he who was in the first post could easily manage this; and for these reasons not only did that first zeal of those who were chosen for this occupation become extinguished, but it lasted only until the fifth nomination, and of all only three endured this terrible and insupportable task to the end, which exceeded three months. One of them, Manoel de Sousa, a native of Villa Viçosa, who, being small

of stature, was called *o Sousinha;* another was Francisco Pereira, a native of the Island of Terceira; and the third a captain born in this city.]

As the enemy were at the foot of the bastion, it was very easy for them to take it; and in case they should succeed in doing this, we made close to them in the inside a counter-bastion of earth and wood to oppose them therewith, and we placed therein two cannon of six pounds each. [27] [We lacked match-cord everywhere; wherefore the soldiers tore up their shirts, and those who had none looked for rags of white cloths, with which they remedied this deficiency;] and as the enemy did not make approaches on the Mapane side, nor had guards posted, because the ground was stony, and the bastion, wall, and ditch all in the modern style, one morning two hundred of us sallied forth, taking the slaves of the inhabitants and a great many hatchets, and we hastened to the wood of N. Senhora dos Milagres, which was half a league distant from the city. There we cut down as many trees of the bark of which rope is made as all of us could carry, and without hindrance we returned; and the enemy, becoming aware that we had made this sortie, made a strong entrenchment, and placed therein sufficient garrison to prevent our making another similar one. [28]

CHAPTER XXV.

In which the same subject is continued.

IN order to relate minutely all that happened during this terrible siege, large volumes would be necessary, and I therefore only relate briefly some more noteworthy events, and which time has not blotted out of my memory, as is the case with all things in this world. [29] [Not a little to be wondered at is that which presents itself to us, and this can but serve as a reminder to us to consider the great misery of our frailty, a true mirror of what we are in this life.] On the day on which we fought that battle with the Hollanders on the seashore of Maroto, [which was on October 17, as I have shown, and on the following, the 18th (to this great

heed should be given by the captains who govern fortified places, principally those beyond the seas, in order that another such event may not happen to them in similar cases) :] the Captain-General heedlessly and without consideration allowed during those two days as many people of the country who dwelt in the seven parishes to enter into the city as there were in the suburbs ; all were useless and of no service. We did not realise this great and culpable carelessness until the beginning of March, when food became scarce, there having been until then more than enough, and it was sold publicly at a rather higher price [30] than usual, but one that was not exorbitant ; and as it failed suddenly we endeavoured to find a remedy, by driving out of the city at night a large number of those people, [of both sexes] [31] and all ages, on four occasions, from fifteen hundred to two thousand, in order that they might go to the country in the interior ; and as the enemy had guards everywhere, they soon made them turn round and go back towards the city, without allowing any of those miserable creatures to allay the great pangs of hunger which they were suffering, simply in order that we might make an end of consuming [what little there might be], [32] and when they reached the gates of the city we would not allow them in ; and those unhappy ones, seeing that in neither one direction nor the other was there shelter, as the only refuge began to throw themselves into the moats, where, without their continuous cries and groans availing them anything, they all perished. [Of all these people there was left, when we surrendered, nothing but the bones near the lake ; the most horrible sight that could be seen in the world ; nearly all being Christians, brought up amongst us, and living under our protection.

With famine there also came upon the city a terrible pestilence, not only on the poor, but it also had no respect for the rich and noble : through it some became swollen like those with dropsy, others without pain or illness fell dead. From the 15th of March, 1656, when this disease commenced, until the 20th of April, when the dead were

buried, there were counted twenty-two thousand and thirty persons; and it is not to be wondered at, for there were households that numbered sixty, and those that were small had twelve or fifteen. Thenceforward whoever buried the dead died: and such was the horror and misery, that all wished themselves buried; for few as were the soldiers left there was not enough to satisfy their hunger. Many people went about the streets begging for the love of God that someone would give them a little hot water; for they knew well that with nothing else could they get relief. On account of these insupportable miseries, a hundred and twenty soldiers deserted from us to the enemy, among them some who guarded posts. These gave them true information of the strait in which we were; and as what they heard appeared to them impossible, they gave it no credit, and also because it was the statement of men who wished to justify their bad behaviour: and in truth there was much more that they might have told. God permitted by his just judgments that, while it rains in the Island two or three times a day, it being very near the equinoctial, the whole time that the siege lasted it did not rain, and caused such heat that even with shoes on it was impossible to go along the streets, which were covered with corpses swarming with noxious flies, which caused a horrible stench. Dogs were slaughtered publicly, and he who managed to get a pound thought it great luck. The elephants that died were eaten even to their skins; and in order to get a chance of this, some were killed secretly; and of fifteen that there were, which were used by us, only Ortelá escaped on account of the affection that all had for him: [33] in the same manner also not an unclean animal escaped which was not eaten. In the case of several honoured Portuguese families the whole of the members were found dead in their own houses.]

A woman, a native of the country, [whose husband the enemy had killed,] finding herself constrained by the need from which all were suffering, and having a little one at the breast, her own child, whom she was nourishing, her milk

failed her; and it appearing to her that without doubt it would die, this wretched creature, entertaining these thoughts, desired to make use of it for her sustenance. Putting this into execution, she cut its throat, and having cut it open for the purpose of disembowelling it, there came a neighbour into her house, who happened to be wanting a light, and wondering at what she saw asked her what she was doing with her child; [and as the robber, who is generally found with the stolen article in his hand, gives no other excuse than that of necessity, so did] this poor woman, [and] confessed unreservedly: the neighbour horrified ran out of the house, and made the matter public, of which word was soon brought to the Captain-General, who with all brevity ordered an adjutant to seize her, and to take her to the bastion of Mapane, where he was to have her tied to the mouth of a gun. [This event became known throughout all the city, and the punishment which she had been ordered to undergo,] upon which several kind-hearted monks came, and by reasoning persuaded the Captain-General to remit the punishment, saying that that woman could suffer none greater than that of being obliged by hunger to kill her own son, the greatest misery of this life, [and one so repugnant to nature itself; whereupon he hushed up the matter, in order not to set a bad example in such a time of distress: several similar cases, when that became known, followed in that distress; however, I relate only that which I know for certain.

The enemy continued incessantly with their batteries, bombarding the bastion of S. João alone with six, as I have said, some of them of eight demi-cannon, and at the Porta da Rainha they had the one with which they had razed the portion of the wall which has been referred to. At this place, on the 4th of May, they had completed another of six, and that night they were to place artillery in it, in order therewith to raze the bastion of S. Sebastião, which being limited and much ruined they could do without much trouble. In the city and siege there happened to be a monk

of the Company of Jesus, [34] a man who was indefatigable and of notable courage; seeing that if the enemy attacked us with this battery in a few days the city would be open, and they would without much trouble make themselves masters thereof; because already at this time there remained very few defenders: he asked some of those who he thought would accompany him in any enterprise, as he had done in others, to come with him; and without revealing what he intended, he obtained a promise from thirteen [35] that they would assemble at the hours of midday, and having obtained leave, which he himself asked of the Captain-General, he sallied forth in command of these few, and without being perceived gained an entrance to the battery, where the sword-blows gave the alarm, so that some were able to save their lives, and in the space of an hour he destroyed the battery, which was constructed of palm-trees and fascines, and having set fire to the whole, was able to retire with those who followed him without any harm, leaving the enemy astonished and confounded; and there is no doubt, that if it had been three hundred who were with him, the courage of our monk would have left not a Hollander alive.

On Sunday, the 7th of May, at eight [36] o'clock in the morning, only the captain of the garrison, a sentinel, and a gunner [37] being in the bastion of S. João, the enemy rushed up on to it, which was not difficult for them, it being so ruined by the batteries, and scarped, that they could do it easier than they could have done with a hill, and having killed the three, without opposition became masters thereof: immediately the alarm was beaten, and all hastened to their posts, those that there were having been hearing mass, and some thirty coming up met the enemy descending the street, where they were set upon by our men with such doggedness that they were evidently determined to sell their lives dearly, and such a hard fight was it, that seventy-six of the enemy were killed, among them three captains, and the rest retreated to the bastion, leaving five banners, without being bold enough to descend any further down the street. As the enemy had

captured that place, the small garrison that we had at the other posts was collected, and altogether we numbered one hundred and fifty, and in a body we advanced three times that day to dislodge them from the bastion with a large quantity of pots and goglets of powder, some of us occupying the counter-bastion which we had made of wood, and with the two cannon; and we threw among them many pots and goglets of powder, without any of them setting fire, and at last one set fire and did them great damage; for when that powder came amongst them without their being forewarned, they were set on fire in such a manner that we saw hats and pieces of banners flying burning through the air. Towards the evening, the enemy, not being able any longer to bear the many shots and the large quantity of fire, by which they had lost the greater part of the men whom they had in their force, left the interior space of the bastion, and set themselves to defend it from without, the same parapets serving them; which, as it was so scarped, they were well able to do. With the large quantity of powder that we used to make up for want of men, it could not but happen that someone was set on fire, which caused a great conflagration, several persons of note amongst us being killed, and the fire attacked the wood of the counter-bastion, which having the rubbish as a foundation, the cannon came tumbling to the ground. We lost on that day more than eighty soldiers and captains, in which all displayed great valour and zeal in defending the place: nor was that small which was displayed by the Captain-Major Antonio de Mello de Castro, Gaspar Figueira de Cerpe, Diogo de Sousa de Castro, Ruy Lopes Coutinho, D. Diogo de Vasconcellos, and other gentlemen and captains, who with valour lost their lives in this siege: and to name them and recount in detail the great amount that each one performed is not possible for me; nor less deserving was] Father Damião Vieira, a monk of the Company of Jesus, for he worked [during the whole siege] more like a careful and watchful captain than might have been expected from a monk by profession, for there was not an assault in

which he was not the first, and of many he was the author, all with good success, it being he who led the attack [by the three hundred who gained an entrance by the lake in the first assault,] and he who destroyed the battery [38] [at the Porta da Rainha : with confidence I say that the company may be proud of such a soldier, and the soldiers of such a captain. By 9 o'clock at night we no longer had sufficient troops to drive them back, and if they had returned to attack us in the street without doubt they would with little trouble have killed the few that remained.

That night they brought a large quantity of fascines and earth, with which they formed breastworks before the city, and by morning they already had their artillery in position, which being seen by us, a council was called in order to determine thereat what was to be done in the state and circumstances in which we found ourselves : at this there were some votes, that the few women and children that there were should betake themselves into a church, and that fire should be put to it, and in like manner to the whole city, and that the few who remained should die sword in hand in the midst of the enemy, in order that there should be no trace left of the people of that city, and that they should not be able to boast as conquerors. The Superiors of the Religious Bodies took part in that assembly, and put a stop to such a proposition, saying that it would be a heathenish and entirely barbarous act, condemned by divine and human laws ; that we had to reconcile ourselves to what God disposed, without seeking to oppose his divine decrees ; that supposing His Majesty had strongly recommended the defence of that Island, he would have to call his Ministers to account for not having during all that time sent any succour. On these arguments, and with some tears, all agreed, that seeing that we had no other remedy, a parley should be held with the enemy, and that we should send and treat for honourable terms: on the 9th of the same month this was carried out, and until commissaries were appointed we continued fighting. They permitted that all the men of war should

leave the place with their arms, matches burning, banners unfurled, drums beating, and should march with four pieces of artillery to Nossa Senhora da Vida, the General's quarters, where they were to pile their arms ; and that the captains should not be deprived of their ordinary arms, and that then they with all the infantry should enter in in our place from that position ; and that the men of war should let their clothes remain in the houses of the inhabitants, in order that each one might take his own, when they should embark ; that the two Generals with their movables and servants should place them in whatever place they wished, and they granted the same to all the inhabitants and their families, and that for the space of a year they might freely sell all the movables that they could not or did not wish to take away, and they granted to all at this time passage in their ships : to the monks consequently, and that they might take all the articles of divine worship ; they requested however of all that no one should publicly carry away jewels, gold, or silver, or similar things, in order to avoid rash acts on the part of their soldiers. All the above was agreed to with Adriano Uvandremed, [39] the General who succeeded Giraldo Holfot, who was killed in the siege by a carbine shot.]

Chapter XXVI.

How the city of Columbo was entered, and the men of war were sent to Negapatão.

On the 12th [40] of May, 1656, at three o'clock in the afternoon, we left that city ; seventy-three [41] men of war, very thin, and these were all that remained there, among them being several maimed, without arms and legs ; and all looked like corpses. We marched in single file through a crowd of natives, who came from one side and another to look at us, and as these were almost all from Candia, [our enemies] they showed in their faces the feeling [that possessed them] at seeing us in that condition. [42] We left the four pieces behind at the gate of the city, as we had no one [43] to bring them, and having arrived at N. Senhora da Vida [44] [the

quarters of their General,] we piled all our arms [in the guard-house,] [the chief officers and captains retaining their swords,] which having been done we went up to the house where we found the General and the major, [45] who received us with undisguised joy, [46] [and drinking a toast to us they desired to take their leave, saying that we might remain at ease,] and that before it got later they wished to go and receive the infantry and the Generals; we answered them, that their honours might go and receive the Generals, but that all the men of war were present. At this reply they changed colour, the great joy with which they had received us giving way to evident chagrin, and after speaking to one another in their own tongue for a while, they said to us: "It appeared to us that Your Honours were the superior officers"; and so it was of necessity, for on our having an officer of any post killed, his place was at once filled up, so that of the seventy-three there were as many officers as soldiers. [47] [As soon as they had gone towards the city there came a captain, who politely asked us to follow him, and took us nearer to the fortress, putting us into some good houses, which had the convenience of a walled garden, and at the gate he placed as guard a band of soldiers, who served us right willingly, bringing us what we had need of: here we passed two days, at the end of which came their Camp-Master-General, offering us many apologies that his duties had not permitted him to be able sooner to look after our comfort, and that he was sure we must have fared badly through want of necessaries. He took us by that road towards the city very slowly, conversing, and saying what an account we should have to give to God for allowing so many men to perish, in order to maintain what we were not able to; that he had gone over the posts that we had defended, and that it was not possible that they could be garrisoned by less than twelve hundred soldiers; that he had read of many sieges that had taken place in the world; but that none could compare with that, since others had lasted a longer time, but not with the miseries and other incidents of this:

and that all those who had deserted to them had told them what were the sufferings inside the city, and they did not believe them, as it all appeared to them impossible. He took us inside their works to show us the fortlets and batteries, and during the conversation we had the opportunity of asking him the quantity of balls and powder that they had used: of balls, he said, the number was not known, for beside a large quantity coming to them on three occasions, they had made use of ours; and of powder he mentioned such a quantity that we were astounded; I do not state it, as I do not trust my memory: that there were engaged in that siege, including reliefs, eight thousand three hundred and fifty men, all from Europe, and of these there remained one thousand two hundred who carried arms, and seven hundred wounded and burnt; that all the rest were dead. With this he brought us into the city, lodging us in the Church of the College of the Company, and in taking leave he said to us that we could bring our clothes there, and each one transact whatever business he had, because three days from then we were to embark.

At the door of that Church he ordered a company to be placed on guard, in order that not a soldier of us should receive injury, and any time that we wished to go out to transact any business we did so without hindrance: only at night they would not allow it, lest any accident should happen to us: and on the Camp-Master-General's coming across some soldiers who were trying to enter the house of a rich citizen, he cut one to pieces with his sword, and two were hanged; and because of this he appointed four watches, with very strict orders that no injury was to be done to a single person of our people. Three days after that he ordered us to embark, putting us on two ships with some citizens and poor widows, but he would not allow us to embark boxes or trunks, in order not to overload them; wherefore each one packed his clothes in bags and sheets. In this manner we embarked, and in a few days arrived at Negapatão, where they freely gave liberty to all those who

had been prisoners at Galle, and had been divided between the ships. Towards the Generals and all the citizens they fulfilled the terms of capitulation scrupulously, showing great courtesy to all.

When we surrendered there was not a piece of bronze artillery left that had not some damage, on account of their all being either without trunnions, or with the muzzle-ring gone, or cracked, and the touch-holes were wide enough to contain an arm, and many of the iron ones broken, and only some, and the pedereros that were at the flanks, had not suffered this damage ; for though in many parts of the city there were no batteries, those that were in these posts were moved about, and thus not one that was in a fit state had any rest. We used in this siege three thousand seven hundred and twenty-nine quintals of powder ; when we surrendered we had twenty-four and two arrobas.]

The King of Candia, as soon as they besieged us, came down thither, bringing forty thousand men of war and service, with whom he assisted them ; and when he saw that the city had capitulated, he sent some of his men into it with great promises, in order that they might come over to him. [48] [Most of the sons of the soil and some Portuguese with their families did so, and in their company several of the clergy, and to all these, and to those whom he held prisoners in Candia, he distributed towns in the territories of this Crown, so that all might live with liberty, in our religion, without forcing anyone to adopt any other rite. [49] He was very urgent with the Hollanders, that they should deliver up to him Gaspar Figueira de Cerpe, and he promised for him a large amount of money : to which end they held a council, at which they resolved not to deliver him up to him, and sent a reply to the King, that they could not do it, as it was forbidden to them by law ; because, beside that we had surrendered under terms of capitulation, it was a great crime and abomination to deliver up a Christian man to one who was not : and in truth they punish severely the crime of exchanging cattle ; [50] the fact being that they did not do it

expressly on this account, inasmuch as they understood that he wanted him for his captain, and therefore they at once arranged for him to embark, and during the days that he remained they placed a body of soldiers in guard over him, not allowing him to leave the house, bragging to him of the favour of not delivering him up. The King had sent to make offers to this same Figueira; but he did not care to give heed to his many promises, although he knew well that he wanted him more to take command of his army than to do him harm for the victories that he had won over him; and he was mourning over the last one up to the time when we surrendered.]

On the 19th of the same month the King broke peace with them and fought a battle with them in the great stockade, in which he was the victor, and he would no longer grant the terms of peace which they solicited, because with this war he remained absolute ruler of the whole of Ceilão, and the Hollanders retained possession of only the forts [and some towns which were near the seashore;] which derive nothing from the interior country: and should the King have to come to an agreement with them, of necessity he would have to give up to them all the lands that belonged and still do to the Crown of Portugal: in such manner that in order that the King may remain ruler of Ceilão, he has to carry on war with the Hollanders, and there remains to them more of loss than of gain. The advantage that they have is that the little cinnamon that is produced by the Island is at their disposal, and they can ship it, because the King does not trouble about it. [51]

NOTES.

[1] Le Grand has altered this to "*nuestra Señora d' ajuda*," thus substituting Spanish for Portuguese, and turning "Our Lady of Life" into "Our Lady of Help"!

[2] Le Grand has simply "& qu'il n'étoit point terrassé," which Lee translates "and that it was not sloped off from behind," which is scarcely correct. The MS. used by Le Grand omits the words in brackets.

[3] Lee, misled by Le Grand, makes Ribeiro state that the fascines and earth were used for sloping off the bastion behind!

[4] Le Grand's MS. has "estar alojado" (being lodged) instead of "ter guarniço.''

[5] The thick brackets here, as in other places, mark omissions in Le Grand's MS.

[6] In the original "*furadores*."

[7] Compare the details given in Baldæus.

[8] They were the yachts "Maaght van Enkhuyzen" and "Workum."

[9] Chinese sampans, according to Baldæus.

[10] Rather the night of the 11th. See note [12].

[11] Baldæus makes the Portuguese narrator whose diary he translated speak of "the Acouras," and the English translator has "the gate of Acouras."

[12] This should be the 12th, according to both accounts in Baldæus. In Saar the date is given as "2,"—a printer's error, doubtless.

[13] Le Grand being puzzled how to connect this sentence with what preceded it in his MS., not being aware that the copyist had omitted a long passage, translates it as follows:—"& as the sea had retired very far, they [the Hollanders!] *had made a stockade, on which they had planted a battery of three pieces of cannon:* & it was from this battery that they gave the signal of attack." This is ingenious, but of course utterly incorrect.

[14] This body of besiegers was led by Major van der Laan.

[15] These troops were led by General Hulft in person, and he had to retire, being wounded in the thigh.

[16] Or "market-place," *praça* having various meanings. Le Grand translates it "place d'armes," which Lee renders "esplanade."

[17] This was Father Damião Vieira. See Baldæus.

[18] Following his defective MS., Le Grand connects this sentence with the one that follows the portion enclosed in brackets, and translates thus:—"... so that having heard the disturbance that was taking place on that side [Lee adds 'towards St. Thomas'!], he ran thither, and having cut off the enemy who had advanced too far, he killed more than three thousand of them; and if our soldiers had been more used to warfare, not a Hollander would have escaped"!

[19] Saar was one of those who took part in this unsuccessful attack, and was severely wounded. (See his account.)

[20] This was the "Maaght van Enkhuyzen."

[21] The Portuguese narrator in Baldæus says that the Dutch loss was computed at 1,000; but the Dutch themselves made the number much less. Le Grand's MS. has "trez mil" instead of "dous mil."

[22] The Portuguese narrator in Baldæus says that not more than thirty Portuguese were killed.

[23] The copyist of Le Grand's MS. was obliged to omit this word, having left out Ribeiro's description of the "infernal device."

[24] This is recounted by Ribeiro in chapter XV. of Book II.

[25] On account of the omission in his MS., Le Grand renders this sentence as follows:—"finally, they blockaded the port so well, that we could no longer have any communication by sea, & they captured all the boats that we tried to send out, or that sought to enter, & obliged them to lie alongside their ships."

[26] Le Grand renders this sentence:—"As we could not prevent the enemy from advancing their trenches, & as they had already established themselves at the foot of the bastion of St. John, we made several embrasures in this bastion." The reason why he does not mention the countermine is, that his MS. reads "*cortina*" instead of "*contramina*," thereby making nonsense.

[27] In consequence of the lengthy omission in his MS., Le Grand connects this sentence with the one which commences the chapter, omitting some intervening fragments which the copyist had spared.

[28] Le Grand renders this sentence as follows:—"The enemy *were also near another bastion*, which was on the Mapané side, but as this part was fortified in the modern style, they did not attempt to attack us in that direction, and therefore there were few men there: we perceived this, and made a sortie which succeeded so well that we opened up a road for ourselves to go to a forest which was quite near, & where we cut *wood which we needed.* We had taken with us all the slaves that were in the City, & who were of great service to us on this occasion. We re-entered the City with less trouble than we had had in going out, because the enemy, who had known nothing of our design, did not believe that we would return; but afterwards they made lines of countervallation round this fort, & placed sufficient men there to guard them." It will be seen that, in consequence of the copyist of his manuscript having omitted the first portion of the sentence, Le Grand makes Ribeiro say that the expedition was made to obtain wood (Lee makes it *fire-wood*) instead of *match-cord.* This sortie seems to be the one referred to as follows by Baldæus (English translation):—"The 12 Decemb. 200 Negroes being seen to sally out of the Gate of *Mapane*, keeping along the Seashore, three Companies were ordered to attack them; but they no sooner espied our People advancing towards them, than they retreated in haste to the City. However, three of them deserted to us, and

gave an account that the reason of their coming out was only to cut and fetch some Faggot-Wood for the repairing of the Bastions of *S. John*, *S. Stephen*, and *S. Philippo;* and that they had made betwixt the two former a retrenchment, in case they should be forced to quit the Bastions." Here, it will be noticed, the statement is made that the wood was required for repairing the bastions. Doubtless this was the case, the bark being utilised for matchcord.

29 Le Grand has transposed this opening sentence to the latter part of the chapter, joining it on to the reference to Father Damião Vieira. (See note 38.)

30 Le Grand's copyist has altered "*preço*" to "*tempo*," making nonsense.

31 A characteristic omission of the Le Grand copyist.

32 This is an example of the apparently objectless omissions which occur all through the Le Grand manuscript.

33 In Book I., chapter XVII., Ribeiro says :—"Seeing that we are speaking of these animals [elephants], it is not right that we should pass them over in silence: at least we should say something, and because [many]* have written of them. We shall do so only of one which we had in our possession with sons and grandsons: this was the handsomest animal that can be imagined, and was used by us only in any urgent need, because there were others that performed the ordinary service, and we made use of him solely for hunting the wild ones of the forest: this one was called Ortelá, which also endured the famous siege of Columbo, carrying palm trees by night and day for us during the seven months that it lasted, to repair the ruins caused by the continuous firing of the batteries ; and of fifteen that we had, he alone was not eaten, the others being eaten. The King of Candia sent to take it from the Hollanders who had it at Betal, and if they had asked of him great sums for it he would have given them all in order to have such a possession, which brought His Majesty every year more than fifty thousand† patacas ; and as some will hold this statement to be fabulous, before going further it will be right to explain in what manner." He then proceeds to describe the manner of capturing elephants, in which Ortelá took a leading part.

34 Father Damião Vieira.

35 The Portuguese narrative in Baldæus gives the names of nine.

36 The Portuguese narrative in Baldæus says "about six."

37 According to Baldæus's translation of the Portuguese account, they were "the Captain *Don Diego de Vasconcelhos*, with two School-Children, *Don Constantino de Meneses* and *Diego Jaques*, both less than fourteen years old."

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* Le Grand's MS. has "m^{os}." (for *muitos*) ; the printed edition has no governing word.

† By an error Lee has "15,000 crowns."

[38] Le Grand had to make the best sense he could out of the fragments of this sentence left by his copyist, which he did by adding to them the opening sentence of the chapter as follows :—" I should never have done, if I tried to recount all the details of this siege, the principal circumstances of which have already escaped my memory ; *but I hope that* the Father Damien Vieira Jesuit, who performed in this siege every duty of a Soldier & a Captain, & who distinguished himself more than anyone, *will be able to give us a relation so much the more exact*, as there was not an action of importance in which he was not found among the first." The hope expressed here is fathered on Ribeiro by the worthy Abbé, who, as he tells us in his preface, found Father Damiao's journals among the documents lent him by the Count d'Ericeyra.

[39] Adriaan van der Meyden.

[40] Le Grand alters this to the 10th.

[41] Le Grand alters this to sixty-three. Baldæus says " 14 Companies and 36 Captains," while the Portuguese narrative in Baldæus says " 90 soldiers and 100 armed inhabitants, including officers."

[42] In consequence of Le Grand's copyist having omitted the words " our enemies," the Abbé makes Ribeiro say that the natives " seemed to have some regret at seeing us leave," which is the very opposite of Ribeiro's statement.

[43] Le Grand alters this to " neither oxen, nor mules, nor horses."

[44] Le Grand has " la chapelle de *nôtre Dame de la vie*," which Lee enders " the chapel of Nuestra Senora della Vida " !

[45] General van der Meyden and Major van der Laan.

[46] Lee translates Le Grand's "avec grandes demonstrations dejoye " as " very kindly," which alters the sense entirely.

[47] Le Grand abbreviates this sentence as follows :—" He changed colour on hearing this reply, & engaged for some time in conversation with the Officers who were near him."

[48] Le Grand renders this incorrectly as follows :—" The King of Candy was present at this siege with forty thousand men. He asserted that the Hollanders were bound to hand this fortress over to him, & he even sent persons to sign the Capitulation in his name, but he could obtain nothing." Le Grand joins this sentence to the concluding portion of the chapter, his MS. having a long omission.

[49] In the last chapter of his book Ribeiro states that at Ruwanwella, which the King of Kandy granted to them for that purpose, there were settled not less than seven hundred Portuguese with their families ; and that in all the villages where they settled they had their priests to carry on their religious rites.

[50] In original *passar gados*. *Gados* strictly means cattle or sheep, but is here used figuratively.

[51] Le Grand connects this concluding portion with the first sentence of the preceding paragraph (see note 48), and translates it as follows :—" & on the 19th he fought a battle which he gained &

would no longer listen to any word of a treaty, inasmuch as being able, with all the men that he had, to hold the field, he obliged the Hollanders to remain shut up in their fortresses, & on the other hand if he had entered into a treaty with them, he would have been forced to give up to them the territories that we possessed in that country; so that on both sides they found themselves engaged in a continual warfare, & at much expense, the Hollanders being able to gather only a little Cinnamon that grows around their fortresses, to which the King does not have access so easily."

The CHAIRMAN said they were very grateful to Mr. Ferguson for the care with which he had prepared his very interesting translation. It was a very graphic description of a very terrible siege, and while they were living in such peace and quietness now it was awful to think of the horrors which had been enacted in and around Colombo—horrors to find a parallel for which they must go back to the siege of Jerusalem. Mr. Ferguson had not read some portions of his Paper, but when the whole was printed the Members would be able to see what useful historical information it contained. It would be a very valuable addition to the foundation of a complete history of the period.

6. At the Chairman's suggestion the reading of Mr. J. P. Lewis's Paper on "*Buddhist Ruins near Vavuniya*" was postponed, time not permitting of its being read at this Meeting.

7. A vote of thanks to His Lordship the Bishop for presiding was moved by Mr. ROLES, seconded by Mr. A. M. FERGUSON, and agreed to unanimously.

HIS LORDSHIP in responding said that it was the intention of a gentleman present to propose a vote of thanks to Mr. Ferguson for his Paper, but as that vote of thanks had been overlooked, whilst a vote had been passed to the chair, he must ask the Meeting to take it that a vote of thanks had been recorded to Mr. Ferguson for his Paper.

8. HIS LORDSHIP also stated that it had been the intention of the Secretary to make special mention of a *Sinhalese Grammar* by Abraham Mendis Gunasekara, Mudaliyár, received by the Society and laid on the table. The Grammar had been just completed and issued from the press. Apart from the real value of the book itself, it did great credit to the Ceylon Government Press that such a work should have been turned out in so neat and artistic a style.

The Meeting then terminated.

Council Meeting.

Colombo Library, November 12, 1891.

Present:

The Lord Bishop of Colombo, President, in the Chair.

Mr. Henry Bois.
Mr. W. H. G. Duncan (Hon. Treasurer).
Mr. W. P. Ranasinha.
Hon. A. de A. Seneviratna, M.L.C.
Dr. H. Trimen, M.B., F.L.S.
Mr. G. Wall, F.L.S., F.R.A.S., Vice-President.

Mr. E. S. W. Senáthi Rája, Honorary Secretary.

Mr. Gerard A. Joseph, Assistant Secretary.

Business.

1. Read and confirmed Minutes of Meetings of the Council held on May 13, 14, and 29, 1891.

2. Resolved,—That the following candidates for admission as Resident Members be elected, viz.:—Messrs. John Peter Samarasekara, G. Grenier, Thomas Cook, E. A. Muttucoomaru, W. H. Dias, A. Visuvalingam, James Lemphers, and Advocate Nagapper.

3. Laid on the table a letter from the Honorary Secretaries of the Ninth International Congress of Orientalists to be held in London in 1892, requesting the Society to officially nominate a delegate or delegates to attend that Congress.

Resolved,—That the further consideration of this question be postponed.

4. Laid on the table letter No. 113, of September 3, 1891, from the Archæological Commissioner, annexing copy of a circular drafted by him* and lately issued by the Government relative to the better preservation of objects of archæological interest.

5. Read a letter to the Council dated June 16, 1891, from the Royal University Library of Upsala, calling for an exchange of publications.

Resolved,—That the offer be accepted.

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* See page 29.

6. Laid on the table a Paper on "*A Contribution to Sinhalese Plant Lore*," by Mr. W. Arthur de Silva.

Resolved,—That the Paper be referred to Dr. Trimen for his opinion.

7. Laid on the table correspondence, and submitted a draft letter for the approval of the Council, relating to the privileges of franking which had been recently withdrawn from the Society by Government.

Resolved,—That the matter be allowed to drop.

8. Resolved,—That a General Meeting of the Society be held on the 10th proximo.

General Meeting.

Colombo Museum, December 10, 1891.

Present :

His Excellency Sir ARTHUR E. HAVELOCK, K.C.M.G., Governor, Patron, in the Chair.

Mr. J. H. Barber, M.R.A.S.
Mr. C. Drieberg, B.A., F.H.A.S.
Mr. W. Arthur de Silva.
Mr. F. Lewis.
Dr. H. Trimen, M.B., F.R.S.

Mr. E. S. W. Senáthi Rája, M.R.A.S., &c., Honorary Secretary.
Mr. Gerard A. Joseph, Assistant Secretary.

Visitors : Messrs. Gerald Browne, W. Nock, P. S. Rodrigo, P. P. Goonewardene, A. M. Perera, and several others.

Business.

1. Read and confirmed Minutes of Meeting held on September 30, 1891.

2. The Honorary Secretary announced the election of the following as Resident Members, viz. :—Messrs. J. P. P. Samarasekara, Assistant Inspector of Schools; G. Grenier, Deputy Registrar, Supreme Court; Proctors Thos. Cook, Jas. Lemphers, E. A. Muttucoomaru, W. H. Dias, and A. Visuvalingam ; and Mr. Advocate Nagapper.

3. The accessions to the Society's Library since the last Meeting were laid on the table. The Honorary Secretary stated that the books received were valuable ones. Some were obtained by purchase, others by exchange and presentation. Amongst those received special mention was made of the publications of the Geological Survey of the United States Government, and the publications issued by the Asiatic Society of Bengal, "The Bibiliotheca Indica."

4. Mr. GERARD A. JOSEPH then, on being called upon by His Excellency, read a Paper entitled—

BUDDHIST RUINS NEAR VAVUṆIYA.

By J. P. LEWIS, Esq., C.C.S.

THERE are the ruins of an ancient Buddhist monastery or some establishment of the kind in the jungle near the spill of the Madukanda tank. Madukanda, or Mandukoḍḍai, as the Tamils call it, is a Siṇhalese village about three miles south-east of Vavuṇiya, off the Horawapotána and Trincomalee road. The following description of the ruins is based on the Raṭémahatmayá's official report dated October 16, 1890.

An embankment of considerable size encloses a square of about 200 yards' length of sides. The inner slope of the embankment is faced with rough slabs of stone. The square is divided into two by a cross embankment, part of which is not now discernible.

In the western half is another square enclosure with the remains of a wall of brick and rough stone. Close up to the western wall of this smaller enclosure there appears to have been a pond, the bed of which is now filled with broken bricks and other *débris*. On the other side of the pond are to be seen the remains of what was probably at one time the Viháragé, all that is left of it now being a single upright pillar with a carved top, and another broken one just opposite it, with five or six others lying near by. Many broken bricks and fragments of stonework lie scattered about the place.

If the other half of the large square was originally a *vila* (tank) for growing lotuses in, it does not appear how, with an embankment on all four sides, it could have obtained a

constant supply of water. But, on the other hand, it is provided with a sluice or culvert just in the centre of the eastern embankment. This sluice is constructed of rough slabs of stone, which form the sides and covering of two parallel channels, each a few feet in width and one or two deep. Besides this sluice there are no signs of there having been any other channel through the embankment. It may have served merely as an outlet for rain water collecting within the enclosure.

If this half of the enclosure was not a tank, it may have been the part allotted to the priests' residence or *árámá*, the western half being that set apart for religious purposes only. This may account for the fact that there is more *débris* of masonry in the western half than in the other.

The eastern half is covered with thick jungle, but there do not appear to be any ruins of buildings in it. On clearing away the jungle in the western half, and excavating the neighbourhood of the pillars already described, a good many fragments of tiles and earthen pots were discovered, and among them, completely buried, what appears to be a sort of earthenware oven, divided into two compartments, was found. The greater portion of it was intact, one end only having been found broken. The face is ornamented with a pattern of lines.

I annex a sketch of it.* It has since been removed to the Colombo Museum.

The back wall of one compartment is broken and detached. The length of the front, which projects an inch or two beyond the side wall at each end, is 16 in., the height 6 in., and the depth of the chambers about 6 in.

I think the site of these ruins was once surveyed. If so, a correct plan might perhaps be obtained from the Surveyor-General's Office.

5. Mr. W. ARTHUR DE SILVA then read his Paper on—

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* Not printed.

A CONTRIBUTION TO SIN̥HALESE PLANT LORE.

In dealing with the subject of Sin̥halese Plant Lore, I shall attempt in this Paper to collect together some of the stories and traditions current in different parts of the Island among the Sin̥halese relating to the members of the vegetable kingdom.

I.—The Principles of the Sin̥halese naming of Plants.

The Sin̥halese names which are applied to different species of the vegetable kingdom are connected more or less with certain ideas which are prevalent about the individual species. Their origin, habit, locality, nature, description, form, and properties are one and all more or less expressed in these names, as will be seen in the sequel.

Origin.

Certain terminations or prefixes in the names of plants point out to a great extent their origin, whether they are indigenous or recent introductions. For example, we have the prefixes, *raṭa*, "foreign," and *mé-raṭa*, "country," before the names of a large number of plants: as *Raṭa-del* (*Artocarpus incisa*), *Mé-raṭa-del* (*A. nobilis*).

Instead of *mé-raṭa* the term *gam* is also frequently used: as *Gam-del.*

But when either the term *raṭa* or *mé-raṭa* is used to denote a species when it is exotic or otherwise, the converse prefix in the opposite plant is optionally omitted: as *Raṭa-lúnu* (Bombay onion), *Allium cepa* and *Lúnu* (onion), *Allium*, *Miris* (chillies), and *Mé-raṭa-miris* (pepper). Again, the term *mé-raṭa* or *gam* does not usually occur when there is no exotic species in existence which is similar in character to a native one: as *Kaluwara* (ebony), *Diospyros ebenum*; *Dan̥*, *Eugenia jambolana.* In like manner the prefix *raṭa* is rarely used when there is no indigenous species resembling the one intro-

duced : as *Té* (tea), *Camellia thea ; Kokoa* (cacao), *Theobroma cacao.* Comparatively a small number of species of plants appear under the last two categories, as so many have at one time or other been imported to the Island from various foreign lands, and the nature of the imaginative power is such that similarities are easily struck out between any one plant and another, and a plant introduced is almost always associated with its counterpart in the Island. As an example, if we take the common native plants, say, the food products, it is no easy task to find plants without their *raṭa* associate : as *Wí* (paddy), *Oryza sativa ; Kos* (jak), *Artocarpus integrifolia ; Pol* (cocoanut), *Cocos nucifera; Batala* (sweet potato), *Batatas edulis ; Mẹ́* (bean), *Phaseolus vulgaris.* All have their *raṭa* counterparts.

Habit.

A certain class of terminations employed in the naming of plants divide them into three great divisions according to their habits,—*gas*, "trees," *wẹl*, "creepers," and *palá*, "herbs," respectively. Examples of this class are numerous, but I may mention here *Kos-gaha* (jak tree), *Mẹ́-wẹla* (bean creeper), *Tampalá* (*Amarantus*).

In the *palá* class the term is frequently omitted : as *Aswẹnna* (*Alyssicarpus monilifers*). But, on the other hand, when a plant is a tree or a creeper, the terms *gaha* and *wẹla* are seldom or never omitted.

As most of the common herbs of Ceylon are edible in one form or other, the term *palá* has come to be used as a general term.

Sometimes plants possessing more or less similar forms are found as trees and creepers, when the terms *gas* and *wẹl* always serve to distinguish them : as *Gas-kẹppẹṭṭiyá* (*Croton lacciferum*), *Wẹl-kẹppẹṭṭiyá* (*C. aromaticum*); *Gas-ruk-attana* (*Alstonia scholaris*), *Wẹl-ruk-attana* (*Allamanda cathartica*), &c.

Situation.

The site of growth is also expressed by various prefixes attached to the names. Thus, we have plants beginning their

names with *goḍa*, "land," *diya*, "water," *múdu*, "sea coast": as *Goḍa-para* (*Dillenia retusa*), *Diya-habarala* (*Monochoria hastæfolia*), *Múdu-kaduru* (*Ochrosia borbonica*).

The term *goḍa* is only used when there is another species resembling it growing in moist situations or on the sea coast. But the terms *diya* and *múdu* are more widely used, as comparatively few species belong to the two last classes.

Description.

We come now to the class of prefixes and suffixes in names which more or less serve to denote some physical description or other that aids in the identification of a particular plant. The words may either denote the form of the plant or any particular position of it or its organs, or other characteristic marks.

Among those of the first-stated variety—the terms which denote the form of plants—we have *hín*, "small," and *maha*, "great": as *Hín-bówiṭiya* (*Osbeckia octandra*), *Maha-bówiṭiya* (*Melastoma malabathricum*).

The terms *hín* and *maha* are used in the naming of such plants which are generally of the same genus, bearing almost the same characteristics, with the only difference of having the different organs smaller in size to those of the other species. In almost all instances, when we meet with either a *hín* or a *maha* plant we are certain to have its opposite, as these two terms are very seldom used when their opposites are not found.

Next we come to that class of terms which describe a plant by any unusual colour exhibited by it or any of its organs. We have such terms as *ela* or *sudu*, "white," *ratu*, "red," *nil*, "blue," *kaha*, "yellow," and *ranwan*, "gold-coloured," &c.

Among *ela* or *sudu* plants we have *Ela-wé-weḷ* (*Calamus Roxburghii*), with a light-coloured stem; *Ela-nitul* (*Plumbago zeylanica*), with white flowers; *Ela-baṭu* (*Solanum Xanthocarpum*), with light-coloured fruits; and *Sudu-tampalá* (*Amarantus gangitecus*), possessing light-coloured leaves.

In the *ratu* (red) class we have *Rat-kihiri* (*Acacia catechu*), with red-coloured wood ; *Rat-mal* (*Ixora coccinea*), with red flowers.

Such examples as *Nil-kaṭarodu* (*Clitoria ternatea*), with blue flowers ; *Kaha-petaṉ* (*Bauhinia tomentosa*), with yellow flowers ; and *Raṇwan-kikirindi* (*Wadelia calundulacea*), with gold-coloured flower heads, represent other varieties of colours.

The class of plants which Botanists describe as *Diœcious*, as they bear the staminate and pistillate, or pollen-bearing and fruit-forming flowers, on different plants, are distinguished by two simple terms, which occur along with their names, viz., *mal*, "flower," *geḍi*, "fruit."

These two prefixes not only show that the species belong to the Diœcious class, but they point out definitely which are staminate or pollen-bearing, and which are pistillate or fruit-forming, *mal* and *geḍi* standing for them respectively : as *Mal-tumba* and *Geḍi-tumba* (*Momordica diœcea*).

Next we pass to the consideration of plants which have such prefixes as *potu*, *kiri*, *kaṭu*, *dára*, *dat*—"scaly," "milky," "thorny," "angular," and "dentate," respectively. These terms describe the appearance of plants formed by different modifications, and the names make it a very easy matter to distinguish them. Thus we have *Potu-palá* (*Ipomœa uniflora*), *Kiri-walla* (*Holarrhena mitis*), *Kaṭu-kurundu* (*Scolopia crenata*), *Dára-weṭakolu* (*Luffa acutangula*), *Dat-keṭiya* (*Ophiorrhiza mungos*).

We have also such names as *Nidi-kumba* (*Mimosa pudica*), *Chanchala* (*Desmodium gyrans*), *Agamula-neṭi-weḷa* (*Cassytha*), which denote some special characters of the plants.

The term *nidi*, "sleepy," is applicable to *Mimosa*, as the leaves contract, or apparently go to sleep, at sunset or on the slightest touch.

The name *Chanchala*, "moving," has a very significant meaning, and this plant, which is known as "the Telegraph Plant," is characteristic for the motion of some of its leaves, which always keep turning round at a very slow rate. The

next name, *Agamula-neti-wela*, used for *Cassytha*, at once marks its character, the Sinhalese word literally meaning "creeper without end or roots"; so it is with the *Cassytha*,—it is a parasitic creeper devoid of leaves and made of thin thread-like stems. The plant, though portions are found on the ground, has no roots, so to speak, but obtains its food from its host, the cinnamon, through the suckers which it sends out. In the above-quoted instances the names disclose to the student almost the whole history of these particular plants.

Properties.

We have terms in the names which denote certain properties possessed by different plants, either showing their economic value or their characteristic taste, &c. Among the former we have the terms *tel*, "oily," and *patta*, "fibrous": as *Tel-kekuna* (*Aleurites moluccana*), the seeds of which produce a large quantity of oil, and *Patta-beli* (*Paritium tillieaceum*), a common hedge plant which produces a very fine fibre.

In the other class, which distinguishes certain plants, we have *titta*, *peni*, *lunu*, *kahata*—"bitter," "sweet," "salt," "astringent," respectively: *Titta-kinda* (*Tinospora crispa*), *Peni-waraká* (sweet jak), *Lunu-midella* (*Melia dubia*), *Kahata-gaha* (*Careya arborea*).

Before concluding the consideration of the names of plants I will mention another class which have terms prefixed to them, such as *yak*, *nayi*, *et*, *úru*, &c.—"devil," "serpent," "elephant," "pig," respectively. These terms are prefixed to the names to represent certain ideas about them. For instance, it is well known that the devil is something evil, a serpent is venomous, a pig is ugly-looking, and an elephant is huge in size. So, when any of these occur along with the names of plants an idea is at once formed of certain characters possessed by them. Thus, *Yak náran* (*Atalantia zeylanica*), *Nayi-miris* (*Capsicum fastigiatum*), *Et-demata* (*Gmelina arborea*), *Úrugenda* (*Portulaca tuberosa*).

II.—THE SACRED AND MYTHOLOGICAL TREES.

The Siṉhalese hold the *Bó* tree (*Ficus religiosa*) in the highest veneration, and respect it as a remembrance of certain acts in the life of the illustrious founder of their national religion. Hence, wherever the tree is found great care is bestowed on it, and its vicinity is always kept clean. The great *Bó* tree at Anurádhapura, believed to be a scion of the tree at Buddhagaya, is, according to the *Máhawaṉsa*, 2,000 years old, having been introduced into Ceylon in the reign of Devanampiyatissa.

There are certain other trees, a list of which I append hereto, which are considered to be sacred, inasmuch as they provided the first resting-place where so many Buddhas obtained their wisdom :—

Names of Buddhas.		*Trees.*
1 Dípankara	...	Bú-nuga (*Ficus mysorensis*, Heyne)
2 Kondañña	...	Sála Kalyana
3 Maṇgala 4 Sumana 5 Révata	...	Ná (*Mesua ferrea*)
6 Sobita		
7 Anómadassi	...	Kumbuk (*Terminalia tomentosa*)
8 Paduma 9 Nárada	...	Sona
10 Padumuttara	...	Sarala
11 Sumádha	...	Bakmi (*Sarcocephalus cordatus*, Miq.)
12 Sujáta	...	Bamboo (*Bambusa*)
13 Piyadassi	...	Puwangu (*Myristica Horsfieldii*)
14 Attadassi	...	Sapu (*Michelia champaca*)
15 Dammádasi	...	Ratkarandu
16 Siddhattha	...	Kinihirya (*Cochlospermum, gossypium*, D.C.)
17 Tissa	...	Piyagasa
18 Phussa	...	Nelli (*Terminalia emblica*)
19 Vipassi	...	Palol (*Stereospermum suaveolens*)
20 Sikhi	...	Ẹṭamba (*Magnifera indica*)
21 Vessabhu	...	Sal (*Shorea robusta*)
22 Kakusanda	...	Sirisa
23 Kónágam	...	Dimbul (*Ficus glomerata*)
24 Kassapa	...	Nuga (*Ficus altisssima*, Bl.)
25 Gautama	...	Ẹsaṭu Bó (*Ficus religiosa*)

Most of the trees which grow to large dimensions, such as the *Erabadu* (*Erythrina indica*), *Diwul* (*Feronia elephantum*), &c., are believed by some to be the abodes of certain Dévatávó and Yakkhu, both good and evil spirits. Villagers often light lamps and burn fragrant substances under these trees to invoke the aid of the supernatural beings who are supposed to inhabit them.

There is a belief that certain plants exist in the abodes of the gods. Among these are mentioned the *Parasatu* and the *Kusa*.

The *Parasatu* is said to be a heavenly tree which produces most beautiful and sweet-scented flowers, and many a story is related of the *Dévas* offering or presenting the flowers from this tree as a mark of respect. We read in the *Kusa Játaka* (a Buddhist birth story) that among the presents received by the Queen Sílavati from Ṣakra Déva was the "sweetly-blossomed flower from the tree that grows in heaven."

The other heavenly plant, the *Kusa* grass, is held in great veneration, and the belief is that the grass is found both here and in the heavens. It is mentioned that Gautama Buddha was presented with *Kusa* grass by a Brahmin, which he spread under the *Bó* tree to serve as a seat. *Kusa* grass is also one of the presents which Queen Sílavati brought from heaven along with the *Parasatu* flowers.

Mythological Trees.

Coming to the mythological trees, some of those commonly spoken of are the *Kapruka*, *Kalu-nika*, *Visa-kumbha*, and *Damba*.

Now the *Kapruka* is a tree which is supposed to come into existence once in a *kalpa*, or millenium, during a happy period of the world's existence.

This tree is said to produce any and everything which one may desire to possess, be it the most valuable jewels or the

most precious stones, the rarest metal, the costliest silk or cotton fabric, or the choicest food. All these are obtained by a wish on the part of any individual. The Siṇhalese poets have in all times compared the generous man to the *Kapruka*, and *vice versâ*. We read in Srí Rahula's *Kâvya-sékhara*:—

රුසිරුගුණ සී　　　　　තා
සුරතුරු දිනූ දෑ　　　　　තා
විලසින් විනී　　　　　තා
ලොවට කුළුණෙන් සදිසි මා　තා

Ru siru guṇa sítá
Sura tura dinú deṭá
Vilasin vinítá
Lovaṭa kuluṇen sadisi mátá.

That is—"In personal charms (she) was as Princess Sítá (the Queen of Rámá); her hands excelling (in generosity) even the wishing-tree (*Kapruka*), her deportment exemplary, and in her charity she was verily a mother to the world."

Then there is the *Kalu-nika*. The Siṇhalese *Nika* is the *Vitex*, a medicinal plant common in the Island; but no one pretends to have seen *Kalu-nika* (or the black *Vitex*), though the superstitious have a firm belief that it does exist in certain jungles. It is reported not to be found in all jungles, but only in such places as are noted or connected with the doing of some heroic deed.

The plant when met with and accidentally partaken of by an old man, is said to at once restore him to health and youth, his gray hairs disappear, and the youthful vigour of mind and body return to him; while the ugliest man or woman who partakes of this wonderful plant is said to be transformed into a most beauteous and perfect creature. This belief does not exist only among the Siṇhalese people, but also among the Indians and the Chinese. It is perhaps fortunate that we do not come across this plant at the present day, for who knows what comedies of errors it would produce. It is natural for both men and women to desire to acquire or regain youth and beauty. The plant

would be freely partaken of, and we should constantly be put to great difficulty to find out elderly relatives or acquaintances.

But there is also another belief that portions of this plant can be secured by any industrious man who will follow certain prescribed directions. If any one wishes to obtain a twig of this "tree of life" he will be able to get it through the intervention of a certain bird. There is a bird known in Ceylon as the *Ẹti-kukulá* (*Centropus chlororhyncus*), and this bird is said to build its nest on the sides of mountains, where it lays its eggs. After finding such a nest, the person who desires to obtain the *Kalu-nika* should watch it till the eggs are hatched and the young birds come out. Before these quit the nest, wire made of an alloy of five metals should be used to fasten the young *Ẹti-kukulu* to the branch on which the nest is made. Neither the little birds nor the old ones are able to break this magic metal string, unless they bring to the place a piece or pieces of the *Kalu-nika* plant. They know to a certainty where it can be procured. In order to unloose the metal wire they bring twigs of the plant to the nest, when the metal strings give way and the young ones are enabled to fly off. Thus a patient man will be able to find to a certainty twigs of *Kalu-nika* in the nest. But the birds make it a difficult task for one to distinguish the real plant, for they also bring to their nests twigs similar to those of the *Kalu-nika* from other species of plants. If the whole nest and the pieces of sticks in it be taken and thrown into a stream piece by piece, and the person who does so wishes it, the *Kalu-nika* twigs will float against the current,—so it is said; and by this process any person can procure the *Kalu-nika*, which bestows youth, beauty, and long life.

Then we come to another imaginary jungle tree called the *Visa-kumbha*, or the plant which is an antidote for all poisons, the mere act of touching it being sufficient not only to cure one of the effects of a poisonous bite or sting,

but to make him altogether poison-proof. Some believe that this plant is a large tree, others a herb, and others a creeper. But no one actually knows what it is, until he accidentally comes across it. A man possessing the secret of this plant is said never to divulge it, as the knowledge is a source of much profit to him, qualifying him to successfully treat any one suffering from snake-bite. When a man is bitten by a snake, and, as is often the case, is none the worse for it, it is believed that by some chance or other he must have at least trod on the root of the wonderful poison-curing tree. It is also believed that the mongoose (*Herpestes mungo*), which is a great enemy of the cobra, which he attacks with apparent fearlessness, possesses the secret of the knowledge of this plant, and hence does not feel the effect of the poison. The mongoose is supposed to bite the *Visa-kumbha* before and after it attacks a snake. But here also the animal would appear to be very jealous of his knowledge, as he does not allow man to know his secret, for he not only bites the particular tree, but nibbles at all kinds of trees which he comes across, so as to puzzle any individual who may think of following him and discovering the secret.

We have likewise an evil-producing tree, which is also dwelt on in folk lore. This is known as the *Damba* tree. *Damba* is called *jambu* in Siṅhalese, but the particular *Damba* is quite different from any of the species which are known as *Damba* (*Eugenia*); for the former is commonly believed to be a milky plant. It is said that this tree is always inhabited by a host of evil spirits, who, the instant a man approaches, unless he possesses an effective talisman, kill him on the spot. This may be compared with the fabulous *Upas* tree, which was supposed to kill all mortals who approached it.

There are many stories in which it is set forth that kings and queens, when they wish to be rid of any person or pay off a grudge, order their victim to procure something from a *Damba* tree; and unless a talisman is possessed by the unwary

person he always falls a victim. In almost all these tales the intended victim has escaped miraculously by means of some talisman which a knowing royal lover had put him in possession of, and the intentions of the wickedly-disposed persons have been frustrated.

III.—Legends of the Origin of a few valuable Food Products, and of their Names.

There are many stories which account for the origin of certain trees whose products are widely used; thus, we have stories regarding the origin of rice, the cocoanut, and the sweet potato.

To start with I will take paddy, or the rice-producing plant, since rice is the principal food of the natives of this Island. The story relates how in the beginning of this *kalpa* the earth was inhabited by two beings who descended to our sphere from the *Brahma-lóka*, and how they and their children had at first no difficulty in obtaining their food, as the soil itself was rich and fruitful, and they ate of it gladly and thankfully. But as time went on those qualities which made the soil bear palatable food ceased to exist, and a growth, an edible fungus, sprung up, that these early inhabitants were put to the trouble of collecting as their food; hence, it is said, the necessity for work arose, for the reason that wickedness began to appear among the members of this first earthly family, who had originally nothing but good in their hearts. And as the world grew older its inhabitants grew more wicked, and in proportion the greater was the difficulty in obtaining food. For the first growth, which had merely to be collected and eaten, gave place to another,—a species of plant bearing naked grain, in other words, rice, which the people were put to the additional trouble of collecting and cooking before it was fit for eating.

Later on, as the inhabitants grew more numerous and more wicked, "rice" developed a covering or husk and evolved itself into paddy, thereby causing man greater trouble in

having to separate the grain from the husk. But this was not the last of the troubles to the future agriculturist, for now the paddy plant ceased to grow perennially with no help or attention on the part of man, and then came the necessity for the preparation of fields and the sowing of the grain in order to obtain the crop.

This is the story of the paddy plant, which, as such, has a charming simplicity about it. But on looking closer we find a moral significance in it, inasmuch as it attempts to show how labour, trouble, and care were the outcome of evil, and how they increased in proportion as the human race grew in wickedness. Again, there is as it were a scientific glimmer about the account, for it is evidently intended to indicate, after a crude fashion, that law of agriculture according to which deterioration must eventually result when no attention is given to the soil, so that those qualities may be preserved upon which certain desirable effects depend.

The Origin of the Cocoanut Tree.

The story runs, that at one time there lived in a kingdom of the East a mighty king, resplendent with glory and surrounded by a large retinue of ministers, among whom were several wise men—both physicians and astrologers. These latter, by observing the stars and the courses of heavenly bodies, professed to predict events and fix on "lucky" days and hours, and made reports of the results of their observations to the king. The astrologers royal, though well remunerated, were in no little dread of His Majesty, who, if ever their predictions proved incorrect, immediately condemned them to be beheaded.

One day a learned astrologer of the Berawáya (tom-tom beater) caste, noted for his erudition, discovered, after careful observation and calculation, that a certain day was exceedingly "lucky" for planting trees—in fact he went so far as to declare that anything, no matter what, planted at a certain hour on that day would be sure to grow into a tree, which would be a great boon to humanity. The king having been

informed of this, though much gratified, was yet not altogether pleased with the bold assurance of the man, and thinking to puzzle him, inquired whether the astrologer's head, if laid on a stone, would there develop roots and grow into a tree. The answer was in the affirmative; and to the great astonishment of the astrologer the king forthwith ordered the experiment to be carried out. The severed head was accordingly laid upon the stone, and after a time, lo! the noble cocoanut palm—the tree of a thousand uses—sprang up. And to this day it is supposed the resemblance of the cocoanut to the head of the astrologer is preserved, for, taking the husked nut as representing the head, the fibre represents the hair, with the top-knot (*koṇḍé*), while the eyes and mouth are also supposed to be represented by the three depressions.

There are different accounts of the origin of this palm: the Cochin people have one account and the South Sea Islanders another.

The Origin of the Sweet Potato (Siṇ., Batala).

The story regarding the origin of this plant starts with a widow and two daughters who lived together in comfortable circumstances till the marriage of the two latter, one to a man of wealth the other to a husband of moderate means. Bad times coming upon the widow, she paid a visit to her rich daughter, hoping to get help from her, but though she arrived faint and hungry, the ungrateful child offered her no refreshment; and even when a request for food was made the answer was that there was nothing in the house to eat. At first the old woman was inclined to pity her daughter, who, she thought, must have become poor like herself; but soon she became suspicious of her child's ingratitude, and when the latter left the house for a while she looked about and discovered that a pot full of rice had been hidden away. Full of sorrow at the thought of her daughter's ingratitude she wept bitterly, with the result that some of her tears fell

into the pot of rice. Then she left and sought her other child, who received her with all hospitality. The ungrateful daughter was pleased on her return to find her mother gone, and proceeded to partake of her meal alone, when to her astonishment she found the rice reeking with blood. Such was the punishment for her want of filial affection. But the strange sequel is the important part of this account, for when the bloody meal was thrown away an unknown plant sprung up from the place whereon it fell, which in course of time developed a tuber, to which was given the name *Batala*, derived from *bata*, "rice," and *lé*, "blood"—an unpleasant-enough etymology for so estimable a food.

The Origin of the Names of some Plants.

Among a great number of crude stories current as to the origin of the names of certain plants I will here give those connected with the names of two well-known native products, jak and coffee, and that of a medicinal orchid, *Nagá-meru-alé*, "the yam that killed the younger sister" (*Habenaria macrostachya*).

The Jak Tree (*Herali-gaha*).—Like most economic plants, the jak tree was originally found growing wild, and its value as a food was known to none. It was in fact considered to be a poisonous growth till the god *Sakra* made its value known by a strange method. The divine benefactor is related to have descended to earth, having assumed the form of an old man, and, carrying a large-sized jak, to have presented himself before a village housewife, entreating her to boil for him the fruit he carried. With some persuasion the woman was induced to do the service asked for. After delivering his burden the old man went away on some pretended business, giving the woman strict injunctions not to taste of the fruit. The strange plan of the god succeeded well, for, with the proverbial curiosity of woman, the housewife, like her mother Eve, was most inquisitive to know what the fruit tasted like, for the aroma of the boiling jak

rather pleased her. Having cautiously tasted a portion of a seed, she was quite fascinated by its agreeable flavour, and eventually partook of the greater portion of the boiled fruit before the old man arrived. The transformed god on his return seeing what had occurred, accused the woman, calling her *Hera-liya*, "thief woman," and disappeared. Since that time the jak has been known by the name of *Hera-liya*, while the fruit has become a favourite food with the people of Ceylon.

Coffee.—The coffee berry, as it originally grew in its wild state, was looked upon as a poisonous fruit. It is related that a certain woman, after having quarrelled with her husband, made up her mind, in a fit of anger, to put an end to her miserable existence by taking some poison in his absence. Making her way into the neighbouring jungle she found a tree laden with red berries, and gathering some of the fruit peeled off the outer husk and attempted to eat the seeds; but these were so unpalatable that she decided on roasting them first. The roasted berries, however, proved more bitter and distasteful than the raw beans, and being unable to swallow them, she conceived the idea of reducing them to a powder, and, after mixing this with water, drinking it down. By a strange chance there happened to a pot of hot water near at hand, and this water she poured over the coffee powder, drank off the infusion, and prepared herself for death. To her astonishment, however, the enraged wife found that the coffee, so far from acting as a poison, seemed to enervate her, and at the same time to calm her rage, till she felt ashamed of her cowardly attempt to take her life. On the return of her husband she went to him in contrition and confessed all, and he, after mildly rebuking her for her weakness, decided to try the infusion of the berry himself, which having done he pronounced it excellent. Henceforward coffee became a favourite beverage, and the berry was called *Kópe*, "anger," since it was the anger of the woman that was the means of discovering its virtues.

Nagá-mẹru-alé ("the yam that killed the younger sister"), *Habenaria macrostachya.*—Various stories are current as to the origin of the name of this plant: one is the following. It happened that a Vẹddá and a younger sister on their way to another part of the country had to pass through a forest. The Vẹddá, who was armed with bow and arrow, and his sister, tired after a long day's walk, sat down to rest, and the former laid aside his bow and stuck the arrow in the ground. The sister, asking her brother for a little lime to chew her betel with, the Vẹddá gave her the lime on the point of the arrow. Scarcely had she chewed the betel when to his amazement and horror she approached him with amorous gestures. Deciding that death alone could remove the disgrace of her conduct, he drew his bow and shot her. Subsequently the unhappy Vẹddá found the cause of this strange behaviour was owing to the arrow having been tainted with the juice of a yam which it had pierced when stuck in the ground.

This yam has since been known as the *Nagá-mẹru-alé*, "the yam that killed the sister."

Two versions of the story are given by Mr. Nevill in the "Taprobanian," vol. II., p. 3.

Plants in Folk Lore Tales.

There are several folk lore tales current among the Siṇ̊halese, in which trees are mentioned as having played an important part. I will here relate one.

There lived in a certain village a gamarála and his wife. They had a child named Kirihami. The gamarála was a well-to-do man, possessing fields and gardens, which he regularly cultivated and filled his aṭu with their produce, so that the family were in comfortable circumstances. It happened that the gamarála's wife once got ill, and the husband and his daughter were put to no little anxiety owing to her illness, as she grew worse and worse daily. The woman loved her daughter very much, and she thought, if she were

to die, her daughter would suffer a good deal, for she knew well that the *gamarála*, being a comparatively young man, and possessing extensive fields, would take unto himself a second wife after her death, and she had a presentiment that the step-mother would not treat her daughter well. The woman got worse and worse and was dying, but her thoughts were centred on her beloved daughter. Before breathing her last, with a great effort she told her daughter she would get on by pleasing any step-mother she might get, and that she (the mother) would be transformed into a white tortoise and inhabit a pond in the vicinity, and requested her daughter to think of her whenever she was in distress.

The woman died, and, as she had rightly guessed, the *gamarála* very soon married a second wife. This woman proved herself to be very kind to the step-daughter, but all this kindness disappeared when she got a daughter of her own. Henceforth Kirihami led a miserable life; she was made to do all manner of irksome work, and was vexed in many ways. Remembering her dying mother's injunctions, she repaired to the tank, where the white tortoise saw her every day, bathed her, dressed her, and gave her choice food. The wicked step-mother was soon told of all this by her own daughter, and determined to put an end to the tortoise. With this idea she pretended ill-health, and when the *gamarála* questioned her what remedy would cure her, she informed him that she would become perfectly well if she could have the flesh of a white tortoise. So the white tortoise was caught and brought home, put in a boiling pot of water, and Kirihami had to cook it for her step-mother. The tortoise, who loudly lamented not its own death, but the fact of having to leave Kirihami behind, instructed the daughter, before dying, to preserve a piece of bone and throw it in a certain place, when it would spring up into a mango tree, which would supply her with fruits and anything she was in need of. The girl did as she was told, and the tree sprang up in due course of time. Whenever she went near the tree the boughs, laden with sweet fruits, bent down, so

that she was able to pluck and eat as many as she wished; but when the daughter of the other woman approached the tree the mangoes became very sour and infested with grubs. This also came to the ears of the wicked step-mother, who, determining to get rid of the tree, pretended ill-health, and entreated her husband to get her the stem of that very mango tree for firewood, when she would get better. This the man proceeded to do, but before it was cut down the transformed mother, with her wonted kindness, instructed Kirihami to possess herself of a small twig, which she said would act as a talisman, and give her whatever she wished for. So the wicked woman's malicious designs against her step-daughter were frustrated, for Kirihami left home and procured for herself all sorts of jewellery and riches, and eventually became the queen of a mighty prince.

IV.—Superstitions connected with Plants.

Repeating the Names of Plants.

There are certain plants which bear fruits which have sometimes a bitter taste and on other occasions are quite pleasant to eat. Among these we have the *Dummẹlla* (*Trichosanthes cucumerina*) and *Kẹkiri* (*Zehenaria umbellata*). The popular belief is that the bitterness is felt if the name is pronounced before eating them. So people take special care not to pronounce the names of these plants until they have partaken of the fruit.

The same belief exists in regard to certain acrid plants, such as *Habarala* (*Alocasia macrorhiza*). There are several species of *Alocasia* the yams of which are used as food. When cooked and eaten they generally produce a rasping sensation on the palate, owing to the presence of certain acrid properties. Some varieties are more acrid than others, but cultivation improves them a good deal, making them valuable food products. It is believed that the *Alocasia* yam, though it be from one of the worst varieties, will not give the rasping sensation if its name is not pronounced by the eater or any one in the eater's hearing. As soon as the name is uttered the sensation comes on.

Superstitions connected with Forests.

In different parts of the Island, where there are unexplored jungles, there is a common belief in the existence of what I may call a "god's orchard." The god is said to be *Saman*, and "*Saman Deviyannagé Uyana*" is said to exist in the heart of the jungles where no man is able to penetrate. These gardens are said to be replete with all varieties of delicious fruit, which hang on the trees in abundance. It is also said that if a person loses his way in the jungle and wanders about, he generally comes across the orchard, where he can eat any quantity of the fruits, but is not able to take away anything from it; for if he happens to take any fruit with him he will not be able to find his way out of the garden until he throws it away.

Effects of certain Plants on Animals.

We have the *Burulla* (*Leea staphlya*), which is supposed to be a very noxious plant for cattle of all sorts. No cattle-keeper will ever, even in the greatest emergency, use a *Burulla* stick for driving his animals. It is also believed that when an animal is hit with one of these sticks it sickens.

The *Burulla* plant is considered to be the devil's plant, and in devil ceremonies its leaves are used for decorating the bodies of the dancers.

The *Kuppaméniya* (*Aclypha Indica*), another plant, acts like a charm on cats. These animals, when brought in contact with one of the plants, get as it were mesmerised, and will not move away for a long time. The popular belief is that the plant is a special medicine for the animal, and hence it loves it so much that it does not wish to leave it.

Plants in Devil Ceremonies.

Plants and flowers are commonly used in devil ceremonies, and flowers of different hues are used in offerings to different devils according to certain prescribed rules. White and fragrant flowers, such as *Jasmine* and *Idda* (*Wrightia zeylanica*), are used for such evil spirits as are supposed to be comparatively mild in their dispositions. Red flowers

always indicate devils who are noted for their evil dispositions, and the commonest flower thus used is the *Rat-mal* (*Ixora coccinea*). In these ceremonies young cocoanut leaves and plantain stalks are commonly taken, and sticks from bitter (*Aurantius*) plants are used as the magic wands, commonly known as the arrows, or the *í-gas*. Limes are cut after various charms to cure diseases and to drive away evil spirits, and these fruits are sometimes burnt, after they are cut, in a fire made of five kinds of bitter woods.

Again, we meet with different kinds of creepers and leaves used in these ceremonies. There are said to be one hundred and eight varieties. The leaves of the mango tree are used to drive away evil spirits. Betel, rice, and flowers are also used as offerings to the devils. Trees which grow to a large size, as *Erythrina*, *Bó*, *Nuga*, &c., are considered to be the abodes of a certain class of spirits.

Various Phenomena in Trees, &c.

The flowering of a *Tala* tree (*Corypha umbraculifera*) is considered to bring misfortune to the village in which it occurs, and any unusual appearances in trees are considered also to bring on evil results. To avoid danger on the occurrence of such phenomena the devil-priests perform a ceremony known as *gará-yakuma.*

Again, when certain epidemics prevail in villages, *pol-gẹhuma* (cocoanut-fighting) is resorted to. In this ceremony the people in the village divide themselves into two parties, and assemble at a certain spot, taking with them a number of nuts, and each party in turn hits the cocoanut which the other side throws, till all the nuts of one party are broken. The other thus wins, and the people parade the village in procession chanting certain verses and invoking the aid of deities to prevent any catastrophe occurring.

Even in the planting of trees there are various superstitious beliefs. First, it is understood that plants which are expected to bear fruit should be put in the ground in the forenoon, and those which produce yams in the afternoon.

It is also commonly believed that those who plant arecanuts will be subjected to nervousness or shivering fits.

As regards the plucking of fruits, the Siṇhalese have a popular belief that the plucking of dates is a cruel act, because by that means the birds are deprived of a favourite food, while those who pluck do not gain much profit.

When chewing betel people generally break off the ends, the pointed apex and the piece of petiole at the base. It is supposed that the petiole is to some extent poisonous, as the betel is said to have been originally brought from the Nága world, and that when a *nága* (cobra) was bringing it hither it held the stalk in its mouth; while the apex is thrown away because it is considered to be below one's dignity to chew it.

The hair-like lichens which are met with on the stems of jungle trees are called "Devil's-hair," and it is said that devils, when they walk about with their legions in these unfrequented jungles, leave them there.

The *Diya-talaya* (*Maxtixia tetrandra*) tree is considered to be a plant which grows in places where there is water below and the name itself signifies a water-vessel. In boring wells the tree is taken as a sign of success. The same properties are ascribed to the *Kumbuk* (*Terminalia tomentosa*) tree.

Snakes are said to love sweet-scented trees and flowers. The sandalwood tree is popularly associated with snakes, which are said to encircle its stem; and the screwpine flower is also said toharbour them.

The *Tóra* (*Cassia tora*), wherever found growing, is considered to be a sign of the fertility of the land, while a village where this plant is not found is popularly held in contempt. Children when touched by the nettle (*Girardrini apalmata*) usually resort to a *Tóra* plant and rub its leaves on the part of the body touched, repeating "*Tóra kola vise nẹta kahambilyáye vise ẹta*," "*Tóra* leaves are the stingless: *kahambiliyá* leaves (nettles) sting."

Another form of superstition is the *kema*, when the applier of a medicine, which consists generally of the part of a plant, keeps perfectly silent all the time till he finishes his treatment. This sort of treatment is known as a *kema*.

In connection with devil ceremonies, the water which is used for charming purposes is prepared by mixing some fresh turmeric, *Curcuma longa*, and is known as *kahadiyara* (turmeric water). The threads which are charmed are also likewise coloured with a piece of turmeric.

In slicing arecanuts for chewing purposes the first slice, which is that which contains the scar, is called the "widow's slice" (*kanavendum petta*). There is an idea among some people that a woman chewing it constantly will become a widow very soon.

The paddy cultivators have a belief that there is a certain devil known as *Kohomba Yaka* ("margosa devil"), who removes the rice from the threshing-floor, and hence the ceremonies connected with it.

When epidemics prevail, and especially contagious diseases, the barks of some trees are tied on the fingers or the hands of persons as a protection from the disease. The bark of the *Bó* (*Ficus religiosa*) and *Bómbu* (*Symplocos spicata*) are thus used to prevent the contagion of sore eyes, and some people have a firm belief in their efficacy.

There is another belief which is prevalent, that certain trees when growing opposite a house bring good fortune while others bring misfortune.

Among the fortunate trees the following are included:—

Ná (*Mesua ferrea*).
Palu (*Mimusops hexandra*).
Múnamal (*Mimusops Elengi*).
Sapu (*Michelia Champaca*).
Pomegranate (*Punica Granatum*).
Margosa (*Melia Azedarach*).
Arecanut (*Areca Catechu*).
Cocoanut (*Cocos nucifera*).
Palmyrah (*Borassus flabelliformis*).
Jak (*Artocarpus integrifolia*).
Shoeflower (*Hibiscus Rosa-sinensis*).
Idda (*Wrightia zeylanica*).
Nutmeg (*Myristica*).
Mídi (*Vitis vinifera*).

The following list includes some of the plants which, when grown near a house, bring misfortune to the occupants :—

Imbul (*Eriodendron anfractuosum*).
Ruk (*Myristica Horsfieldia*).
Amba (*Mangifera indica*).
Beli (*Ægle Marmelos*).
Ẹhẹla (*Cassia fistula*).
Siyambalâ (*Tamarindus indica*).
Buruta (*Chloroxylon Swietenia*).
Rat-kihiri (*Acacia catechu*).
Ẹṭṭériya (*Murraya exotica*).
Pénela (*Sapindus emarginatus*).

Among the Siṇhalese astrologers each *nẹkata* (lucky moment) is associated with a particular tree. There are twenty-seven of these *nẹkat*.

A firm belief exists that certain signs which a person meets when starting on a journey portend good or evil. Among the products of the vegetable kingdom which are said to be lucky signs some are noted in the following verse, which I quote from the *Sẹlalihini Sandésa* of Srí Ráhula :—

නල මුදු සුවඳ පිරිකුඹු මියුරු අඹගෙ ඩි
පුල හෙල කුසුම ලිය පියතෙපල රණ්කෙ ඩි
සල සුදු සෙමර සේසත් ගිජිඳුනොදවැ ඩි
බල සුබනිමිති පෙරමග නැකතටත් වැ ඩි

Nala mudu suwanda pirikumbu miyuru ambagẹḍi
Pulahela kusuma liyapiyatepala raṇkẹḍi
Sala sudu semara sésat gijindu nodawẹḍi
Bala suba nimiti peramaga nẹkataṭat wẹḍi.

Look at thine outsets for auspicious signs
E'en better than the *nẹkata*, white fans,
Waving umbrellas white, king elephants,
White flowers in fullest bloom, and sweet-voiced maids,
Gold pitchers, gentle breezes perfumed,
Overflowing jars, peacocks, and *mango* fruits.—*Macready*.

Some plants or parts of plants are said to act as talismans, preserving the possessors from the attacks of different

animals; for instance, the possession of a piece of the root of the *Nága-darana* (*Martynia diandra*) is said to protect a man from snake bite, and that of a fern growing in the Vanni is said to be similarly used as a protection from bears.

V.—Plants in Poetry.

The Sinhalese poets appear to be especially fond of drawing their descriptions from the vegetable world. Perhaps this is in a great measure due to the large number of species of trees found in the Island. They have drawn upon the members of the vegetable world, not only in making their comparisons, but in describing the virtues and personal charms of men and women. I quote instances of this practice from a few standard Sinhalese poems.

The world is compared to a tree and a town to its flowers in the following verse from the *Selalihini Sandésa* of Srí Ráhula of Toṭagamuwa :—

ප ව් රද කඳ නාලෝ මුල් දිගතුබ ර
ලෙව් තුරු සුසැදු යස මිණිමුතු මල්පත ර
ස ව් සිරි පිරි සුරපුර ව න් කැලණිපු ර
දෙ ව් මෙහසුන් විබිසන සුරිඳුට පව ර

Pav rada kanda náló mul digatu bara
Lev turu susẹdu yasa miṇi mutu mal patara
Sav siri piri sura purawan Kẹlaṇi pura
Dev mehesun Vibisana surinduṭa pawara.

Give this message to the exalted god Vibhishana at Kẹlaniya-pura, which is filled with all prosperity like unto the city of Dévas, and in which are the full-blown flowers of renown freely hanging on the tree of the world that has for its root the Nágalóka, for its stem the Mahameru, and for its branches the points of the compass.

In the same book the poet sings of the sky and the sun :—

වදිමි න් සවස නල හැසිරෙණ දිගතුව ල
සොබමන් සුනිල් මිණිනිල් නුබතුරු විපු ල
පතස න් අවරගිර නැටියෙන් වැටෙනක ල
විලිකු න් සුරත් පල වැනි වේ රිවිමඩ ල

Wadi mín savasa nala hẹsireṇa digatuwala
Sobaman sunil mini nil nubaturu vipula
Patasan awaragiranẹṭiyen wẹṭenakala
Wilikun surat pala wẹni wé rivimaḍala.

Then, like a ripe red fruit, the sun appears
Near to its goal, while falling from its stem
Awaragiri in the huge heaven tree,
Beautiful sapphire blue, where evening airs
Wander among its eight outspreading boughs.—*Macready.*

The colour of the robes of Buddhist Bhikkhus is described by Alagiyawanna in the *Kusa Játaka* :—

රැඳුනෙත් ලාර ස
බඳුවදකුසුම්පට ලෙ ස
දෙපට අඳනය තො ස
වඩා තෙමඬුළු වසා නිසිලෙ ස

Rẹndú net lá rasa
Bañduwadakusum paṭalesa
Depaṭa añdanaya tosa
Wədá temaḍúḷu wasá nisilesa.

A double, gold-red robe that draped navel and over knee
He wore : and fitting robe it was, and glorious to see !
Rich was the dye, a richer never graced fabric of the loom,
Its colour mocked in brilliancy the choicest garden bloom.—*Steele.*

The same is described by Srí Ráhula in *Kávyasékhara*:—

රසුදුළ රත්පල ස
වසනෙව් රන් ඇගෑප ස
නුගපලවන් සක ස
පෙරව මතු සිවුර රිසියෙනලෙ ස

Rasuduḷa ratpalasa
Wasnev ran ẹgẹ́pasa
Nugapalawan sakasa
Perava matu sivura risiyenelesa.

Having put on the Nuga-fruit-coloured robe gracefully with care, as if covering part of a festoon work of gold with a brilliant red cloth (of wool).

Srí Ráhula, in the course of the same work, compares the science of ethics as follows :—

ගුරු අටගත් අකු රු
සිකුරුලිය කොල විසිතු රු
පරසරු කුසුම් ස රු
හිමිහු නියලිය අමාපල දෙ රු

Guru aṭagat akuru
Sikuru liya kola visituru
Parasaru kusum saru
Himihu niyaliya amápaladẹru.

The creeper of science of ethics, which had been caused to sprout by Vrihaspati (Jupiter), to be decked with branches and leaves by Sukra (Venus), and to be productive of flowers by Rishi Parasara, was last of all made to bear ambrosial fruits by the Lord (Bodhisat).

The same poet, in his afore-mentioned *Sẹlalihini Sandésa*, describes a bird :—

පුල්මල් කෙසරු මෙන්—රණ්වණි තෙල සරණයු ග
සපුමල් කැලෙව් තුඩ මදරතිනි මනහ ර
නිලුපුල් දෙලෙව් සම්වනි පිය පියපත ර
මලින් කල රූඑව්—එබැවිනි නුබින් එනව ර
නිලුදලද සිදඹුවෝ දිඟුවරලැ නි ලු
නිලුදවට බිඟුපෙල අද තඹරනි ලු

Pulmal kesaru men—raṇwaṇi tela saraṇayuga
Sapumal kẹlew tuḍa madaratini manahara
Nilupul delew samvani piya piya patara
Malinkala rẹew—ebẹvini nubin enawara
Niluda lada sidambuwó diňgu waralẹ nilu
Nilú dawaṭa biňgupela ada tambaranilu

Golden are these limbs, like pollen golden,
Of full-blown flowers : yellow thy fair beak
As champac buds ; the comely feather blue
As petals of blue lotus ; wherefore when,
Like an image flower wrought, thou comest
Through the sky, have not young goddess
Placed thee among their long black locks ? or bees
In lotus dwelling oft encircle thee ?—*Macready*

It is remarkable that in the descriptions of personal charms the poets are at one with each other in using plants and their parts for various comparisons.

In the following verses of the *Kavyasékhara* a forest is compared to a woman :—

තමලුවරලස නිලුපුලන් නෙත් සුරත් බිඹුවැල් ලවන තේ
තඹර වත කොඳදසන් මදනල සුසුන් තඹපලු කොමල තේ
තිසර පියයුරු බිඟු වසාරොද කණරඹ වටොරින් යු තේ
මතකොවුල් සර පිය තෙපුල් දෙන එවන දිටිවන් දිඟුනෙතේ

Tamalu waralesa nilupulan net surat bimbuwẹl lava nate
Tambarawata koňda dasan madanala susun tambapalu komalate
Tisarapiyayuru biňgu wasaroda kaṇaramba waṭorin yuté
Mata kowulsara piyaṭepul dena evana diṭiwan diňgunete.

He saw that magnificent forest, which was like unto a fair lady whose charming voice was the *kokila's* music, whose thighs were the golden plantain trees, locks like unto [clusters of] bees, bosoms the golden *hansas*, soft palms the lotus petals, whose breathing the calm breeze, teeth the jasmine flowers, face the lily, red lips the *kem*, eyes the blue lotus, and flowing hair the *patchouli* creeper.

Another poet, Alagiyawanna, thus compares a woman :—

නෙතු මුවකුසුමු දු ල
කරදර සරණ නවද ල
පුන්තන අමාප ල
එපුර ලිය කප්ලියන් එකතු ල

Netu muwa kusumudula
Karadara saraṇa nava dala
Puntana amápala
Epuraliya kapliyan ekatula.

The women of that royal town were like "the wishing tree,"
Their mouths and eyes, its blossomed flowers, right beautiful to see;
Palms, lips, and feet were like the leaves beside the tender shoots,
Their full-orbed bosoms like that tree's ambrosial precious fruits.—
Steele.

The above two characteristic verses will convey an idea of the methods by which the Siṇhalese poets made their comparisons from plants. There are numerous instances where they describe each personal charm and compare it to some well-known plant, but in the verses quoted such comparisons are brought together in a small compass.

VI.—Plants in Riddles.

There is many a riddle both in verse and prose current among the villagers which has for its meaning a tree or a part of it. The trees which are generally put into riddles are common, either by being used as food or widely met with. I give here some of the more prominent ones which I have been able to gather :—

අපේ ගෙදර වැටමුල්ලේ රනේ යා
මොණරා සේම පිල් විදහාගනේ යා
කුකුළා සේම තෙල් ඇති කරමොලේ යා
තෝරන්යාලු නලලේ ඇස් තුනේ යා

Apégedara weṭamullé ranéyá
Moṇaráséma pilvidaháganeyá
Kukuḷáséma teḷeti karamoléyá
Tóranyálu nalalé ęstunéyá.

Friend, solve this: At the corner of our garden fence there is something with three eyes on the forehead, with a greasy or oily comb like that of a cock, and with feathers spread like a peacock's.

This refers to the cocoanut.

කොකෙක් සේම කඳ මැද්දෙන් බදාග ණා
මොණරා සේම දසඅත පිල් විදහග ණා
ගෙඩි කති කොල නොකති කවුරුත් බෙදාග ණා
තෝරන් යාලු මේ තුන්පදෙ අසාග ණා

Kokek séma kaňda meḍden badágaṇa
Moṇará séma dasa ata pil widahagaṇa
Geḍikati kolanokati kavurut bedágaṇa
Tóranyálu mé tunpade aságaṇa.

There is something like a crane clutching the stem of a tree, and, like the peacock, with its feathers spread in the ten directions. All eat its fruit, dividing among themselves, but not the leaves. Friend, listen to these three lines and solve [their meaning].

This refers to the arecanut tree.

ගසට නමකි ගස මළකොට එක නම කි
ගෙඩියට නමක් ගෙඩි කනකොට එක නම කි
සුඹුලට නමකි සුඹුලේ මදයට නම කි
මේ තුන්පදේ තේරූ කෙනෙක් සපනෙ කි

Gasaṭa namaki gasa maḷakoṭa eka namaki
Geḍiyaṭa namaki geḍi kanakoṭa eka namaki
Sumbulaṭa namaki sumbulé madayaṭa namaki
Mé tunpade térúkeṇek sapaneki.

The plant has one name [while living] and another when dead; the fruit is known by one name, but when eaten by another; the coat has a name and the kernel has another; the person who propounds the meaning of these lines shall indeed be wise.

The above refers to rice. The rice plant is called *goyam*, the dead plant becomes *piduru* (straw), the fruit *wi*, when eaten it is *hál* and *bat*.

අටුවාවෙනි කෙටුවාවෙනි කොලේ සැ ටී
රතුනූලෙන් ගෙතුවා වෙනි මලේ සැ ටී
තුන්මස ගිය කලට කුකුළෙක් විතර සි ටී
අද බැරිනම් හෙට තෝරා එවනුව ටී

Aṭuwáweni keṭuwáweni kolé seṭí
Ratunúlen getuwá weni malé seṭí
Tunmasa giya kalaṭa kukuḷek witara siṭí
Ada berinan heṭa tórá evanuvaṭí

The leaf is as if it were bent and marked, the flower is as if it were woven with red thread. After three months it grows to the size of a cock, and if you cannot solve this to-day 'tis well to do it to-morrow.

This refers to the pineapple, and the following to sugarcane.

දිග්දිගට කොල ඇ	ති	Dig digaṭa kola ẹti
ඊලඟට ගැට ඇ	ති	Ílaňgaṭa gẹṭa ẹti
කන්නන්ට රස ඇ	ති	Kannanṭa rasa ẹti
තෝරන්ට අකමැ	ති	Tóranṭa akamẹti.

The leaves are rather elongated, and next to them are the knots. Though sweet to the taste for the eaters, to solve [the riddle] is not pleasant.

රදාගෙදර යන පා   රේ
ටික්කි ටිකිරි ගසක් ඇ   ති
මල් පුස්ඹයි ගෙඩි තිත්ත   යි
නොතේරුවොත් ටොකු විස්ස   යි

Radágedara yanapáre
Tikki-tikkiri gasak ẹti
Mal pusmbayi geḍi tittayi
Notéruwot ṭoku wissayi.

On the road to the dhoby's house there is a *tikki-tikkiri* tree. Its fruits are bitter but its flowers very sweet. If you tell me not what it is, I will give you twenty slaps.

This is the hal tree (*Vateria indica*), the following the jak:—

වත්තේ ගහෙන් ඩුන්ගාලයි කඩ   න්නේ
පිටින් කටුව ඇටමදුළුයි බොල   න්නේ
දෙකට කඩගහා හැලියේ දම   න්නේ
හපනානම් කොහොමද මේකේ ස   න්නේ

Watte gahen ḍungálayi kaḍanné
Piṭin kaṭuwa ẹṭamaduḷuyi bolanné
Dekata kaḍagahá hẹliyé damanné
Hapanánam kohomada méké sanne.

If you are clever tell me what that is which is plucked with a falling noise from a tree in the garden. There is a covering, and within you find a lot of carps which are cut in two and put in a chatty [for boiling].

කොල ලොකු ගහක් ගේ අසලම තිබෙ   න්නේ
උඩින් මුවේකුත් එලියට පනි   න්නේ
ඇවරී ගණන් වෙන්වසයෙන් වැඩෙ   න්නේ
හපනානම් කොහොමද මේකෙ ස   න්නේ

Kola loku gahak gé asalama tibenné
Uḍin muwékut eliyaṭa paninné
Ẹvari gaṇan wenwasayen wẹḍenne
Hapanánam kohomada méké sanne.

Near the house is a tree with large leaves, and from its top springs a flower-head of conical shape. The fruits grow out in different places. If you are clever solve this.

This refers to the plantain.

VII.—PROVERBS.

A great number of proverbs, too, are based on the characters of trees. We have—

පුහුල්හොරා කරෙන් දනෙයි.
He who steals ash-pumpkins will be known from his shoulders.

The ash-pumpkin (*Benincasa cerifera*) is a large fruit with an ashy powder on its surface. The thief taking it on his shoulders is sure to show the marks of the ash.

බල්ලන්ට ලෙලිපොල් කුමටද ?
Of what use are unhusked cocoanuts to dogs ?

Dogs cannot possibly husk cocoanuts in order to get at the kernel.

ඵල නැති ගසේ කුරුල්ලෝ වසන්නේ නැත.
Birds do not settle on a barren tree.

තනි ගස කවදා උයනක් වේද ?
When can a single tree become an orchard ?

අලේ ලොකුවට බැස්සොත් ඉන්දු එකාටත් උගේ අඹුවටත් හොඳලු.
If the yam produces better the planter of it and his wife will benefit.

නමින් කොස්වත්තේ කන්ට පොලසක්වත් නැත්තේ.
Jak garden by name, yet not even a (tender) jak to eat.

හැදෙන ගස පෙත්තේදී දෙපෙත්තේදී පෙණෙයි.
A thriving plant will be known after the first or the second bud.

ගම්මිරිස් ඇටේ රස දනෙන්නේ විකුවාමලු.
Only when you bite the pepper seed do you feel its taste.

ගස දන්න අයට කොල පෙන්වනවා වගෙයි.
Like showing the leaves to one who knows the tree.

Coming to the poets we find in the *Subâhashita* :—

සත්ගුණ යුත් සතහට වැඩ කළොත්ස   රු
අත්පිට දියුනුවා එම කරතිනිල තු   රු
වත්කර දිය නෙරළුතුරු මුලට පියක   රු
දෙත් මුදුනෙන් පලරස රැගෙණ අමයු   රු

Satguṇa yut satahaṭa wẹḍa kaḷot saru
Atpiṭa diyunuwá ema karati nilaturu
Watkara diya neraḷuturu mulaṭa piyakaru
Det mudunen palarasa rẹgeṇa amayuru.

If any services are done to good men they will always be productive of good then and there. For by pouring water to the root of the cocoanut tree you get the fruit from its top which gives a sweet water.

නිදන සත උදාවන තෙක් රිවිකිර   ණ
නිදන සත සහස තිබුනත් මුළුදෙර   ණ
නිදන වේය ගිලි ජීවුල සෙ මතවර   ණ
නිදන යයි පැවසි ඉසිවරතුමො පොර   ණ

Nidana sata udáwanatek rivi kiraṇa
Nidana sata sahasa tibunat muḷuderaṇa
Nidana wéya gili jivulase matawaraṇa
Nidana yayi pẹvasi isiwaratumo poraṇa

Those men who lie in bed till the sun is up will lose their riches, even if they had the whole of this earth, like the pulp of the woodapple devoured by the elephant. This is the moral told by the ancient Irshis.

Dr. Trimen said that the Paper read was a very interesting and valuable one, and he was glad to find the subject taken up by a Siṇhalese gentleman, as it required a thorough knowledge of the native languages. Speaking of the Siṇhalese nomenclature of plants, he said that the Siṇhalese do possess a sort of classification into genera and species, but not based on any structural points. He ought not to omit to mention the name of Mr. Moon, one of his predecessors in office, who did a great service to the Botany of the Island during the early days, when there was no literature on the subject, by the publication of his "Catalogue of Plants" at Colombo in 1824, which contains a full vocabulary of the Siṇhalese names. In addition to this work on Botany, Moon did great service to

the Island in the establishment of the Gardens at Péradeniya, and had no doubt some hard work in removing the plants from the old Gardens at Kalutara, whence, it must be remembered, all had to be carried with great labour over footpaths, as there were no roads then. Mr. Moon contributed many valuable Papers to the Colombo Literary and Agricultural Society, of which he was the Secretary for some time. Dr. Trimen said that he had paid a great deal of attention to the Sinhalese names of plants, but that those given by villagers require careful checking. Natives, when questioned about the name of a plant, never like to plead ignorance, but either invent some name based on the characters of the plant, or give it the name of some other plant. He found it best to get the name of any particular plant from several different sources and then compare and take the most reliable. He also said that the carpenters caused a great deal of confusion by giving the names of low-country trees to those found in the hill districts, where there were no villages, and hence no real names. He concluded by saying that a great deal was left to be done by Sinhalese gentlemen like Mr. de Silva in determining botanically several plants of which only the native names are at present known.

A vote of thanks was unanimously accorded to Mr. DE SILVA for his Paper.

Mr. J. H. BARBER proposed a vote of thanks to the chair, which was seconded by Mr. FREDERICK LEWIS and carried with acclamation, after which the Meeting terminated.

ROYAL ASIATIC SOCIETY, CEYLON BRANCH.

FOUNDED AS THE ASIATIC SOCIETY OF CEYLON, FEBRUARY 7, 1845; INCORPORATED WITH THE ROYAL ASIATIC SOCIETY OF GREAT BRITAIN AND IRELAND, FEBRUARY 7, 1846.

RULES AND REGULATIONS.

THE SOCIETY AND ITS MEMBERS.

1. THE design of the Society is to institute and promote inquiries into the history, religions, languages, literature, arts, and social condition of the present and former inhabitants of the Island of Ceylon, with its geology and mineralogy, its climate and meteorology, its botany and zoology.

2. The Society shall consist of Ordinary Members and Honorary Members, who may be either resident or non-resident.

3. Members residing in Ceylon shall be considered resident: Members who do not reside in the Island, or who may be absent from it for a year or upwards, shall be considered non-resident.

Election of Ordinary Members.

4. Any person desirous of becoming a Member of the Society shall be nominated by two or more Members, who shall give the candidate's name, address, and occupation, and shall state whether such candidate desires to be admitted as a resident or non-resident Member. Notice of such nomination shall be given in writing to one of the Honorary Secretaries fourteen clear days before the assembling of any Meeting of the Council of the Society at which it is to be considered.

5. The nomination shall remain exposed in the Library until the day of the Meeting of the Council, and any objection to the election of a candidate named therein shall be made in writing to one of the Honorary Secretaries at least three days before such Meeting.

6. The several nominations shall be considered and decided upon by the Council, and at the next General Meeting of the Society the names of the Members elected by the Council shall be announced.

Honorary Members.

7. Any person who has rendered distinguished service towards the attainment of the objects of the Society shall be eligible for election as an Honorary Member for life.

8. All Medical Officers of Her Majesty's Regular Forces stationed in Ceylon shall be *ex officio* Honorary Members during the term of their residence in the Island.

9. Honorary Members for life shall be elected only on the nomination of the Council at a General Meeting of the Society.

10. There shall not be at one time more than twelve Honorary Members of the Society besides the Military Medical Officers above mentioned.

11. An Honorary Member so elected shall be informed of the election by letter bearing the seal of the Society and signed by the President and one of the Honorary Secretaries.

12. Honorary Members shall be entitled, without payment, to all the privileges of Ordinary Members.

The Council of the Society.

13. The Council of the Society shall consist of the Honorary Officers and twelve other Members of the Society.

14. The Honorary Officers shall be the President, Vice-Presidents, Treasurer, and Secretaries.

15. The Honorary Officers and the other Members of the Council shall be elected annually at the Annual General Meeting.

16. Of the twelve Members of the Council who are not Honorary Officers of the Society, four Members shall retire annually, two by seniority and two by reason of least attendance. Of the four retiring Members two shall be eligible for immediate re-election and two for re-election after the lapse of one year.

17. Should any vacancy occur among the Honorary Officers or Members of the Council during the interval between two Annual General Meetings, such vacancy may be filled up by the Council.

18. Five Members of the Council shall constitute a quorum.

19. At Meetings of the Council the chair shall be taken by the President, or, in his absence, by the Senior Vice-President present, or, in the absence of the President and Vice-Presidents, by some other Member of the Council.

20. The affairs of the Society shall be managed by the Council, subject to the control of the Society. The Council shall have power to appoint Committees for special purposes and to report upon specific questions. Unless otherwise arranged, three Members shall form a quorum of such Committees. The Council may also appoint paid officers to

execute especial duties in connection with the working of the Society.

21. The Honorary Treasurer shall keep an account of all moneys received and paid by him on account of the Society, and submit a statement thereof to the Council. The accounts shall be audited annually, and the report of the Auditor, appointed by the Council, shall be read at the Annual General Meeting of the Society.

MEETINGS OF THE SOCIETY.

22. The Annual General Meeting of the Society shall be held in January, to receive and consider a report of the Council on the state of the Society; to receive the accounts of the Honorary Treasurer and the report of the Auditors thereon; to elect the Council for the ensuing year; and to deliberate on such other questions as may relate to the regulation, management, or pecuniary affairs of the Society.

23. At General Meetings the chair shall be taken by the President, or, in his absence, by the senior Vice-President present, or some other Member of the Council. Provided that if the Governor of Ceylon for the time being shall have consented to become Patron of the Society, His Excellency shall be requested, whenever present, to take the Chair.

24. Five Members shall form a quorum.

25. The course of business at General Meetings shall be as follows:—

(*a*) The Minutes of the preceding Meeting shall be read by one of the Honorary Secretaries, and on being accepted as accurate, shall be signed by the Chairman.

(*b*) Donations presented to the Society shall be announced or laid before the Meeting.

(*c*) Any specific and particular business which the Council may have appointed for the consideration of the Meeting shall be discussed.

(*d*) Any question relating to the regulation, management, or pecuniary affairs of the Society, of which 14 days' notice in writing shall have been given to one of the Honorary Secretaries, shall be discussed.

(*e*) Papers and communications shall be read.

26. Every Member of the Society shall have the privilege of introducing visitors at a General Meeting, either personally (in which case the names of such visitors should be notified to one of the Honorary Secretaries) or by a card to be handed to one of the Honorary Secretaries containing the name of each visitor and of the introducing Member.

27. General Meetings shall be convened by the Council at its discretion, or upon the written requisition of ten Members of the Society.

28. Public notice shall be given of General Meetings, but business such as is provided for in section 25, sub-sections (*c*) and (*d*), can be introduced only at General Meetings. At least seven days' notice, together with an intimation of such special business as is to be brought forward for consideration, shall be given to Resident Members.

Payments by Members.

29. Every Resident Member shall pay on admission an entrance fee of Rs. 5·25 and as subscription in advance for the current year a sum of Rs. 10·50. Every Non-resident Member shall pay an entrance fee of Rs. 5·25 and as subscription in advance for the current year Rs. 5·25. Provided that in the case of Members admitted in the last quarter of any year the subscription for that year shall be remitted.

30. The annual subscription (viz., Rs. 10·50 for Resident Members and Rs. 5·25 for Non-resident Members) shall be due on the 31st day of March of each year ; and the Council shall have power to strike off the roll of the Society the name of any Member whose subscription is more than two years in arrear.

31 (*a*). The following compositicns are allowed in lieu of the annual subscriptions due by Resident Members, and payment thereof shall entitle to Membership for life, viz. :—

	Rs.	c.
Upon election	115	50
After two annual payments ...	84	0
After four do. ...	73	50
After six do. ...	62	0
After ten or more do. ...	50	0

(*b*) The following compositions are allowed in lieu of the usual subscriptions due by Non-resident Members, and payment thereof shall entitle to Membership for life, viz. :—

	Rs.	c.
Upon election	60	50
After two annual payments ...	42	0
After four do.	36	75
After six do.	31	0
After ten do.	25	0

32. The Publications of the Society shall not be forwarded to any Member whose subscription remains in arrear beyond two years.

33. A Member's resignation shall not be accepted by the Council until all arrears of subscription due by such Member have been paid.

PAPERS AND PUBLICATIONS.

34. The Society shall from time to time publish a Journal containing papers, illustrations, notes, or letters on subjects submitted to, or discussed before, the Society, together with all Proceedings of the Meetings of the Council and General Meetings.

35. The Council shall appoint a Standing Committee to decide on the admission of Papers into the Journal, or on their being read at the General Meetings of the Society.

36. The Honorary Secretaries shall edit the Journal and send a copy, post free, to each Member of the Society entitled thereto whose address is known. Members requiring more than one copy of the Journal may be supplied with them at half the published price.

37. The author of any Paper published in the Journal shall be entitled to twenty-five copies of such Paper.

The Library.

38. The Library shall be open on Monday, Tuesday, and Thursday from 10 A.M. to 6 P.M., on Wednesday and Saturday from 10 A.M. to 8 P.M., and on Sunday from 3 P.M. to 8 P.M., but not on Christmas Day or New Year's Day.

39. Every Resident Member shall be at liberty to borrow any books from the Library, except such works as may have been reserved for use in the Library itself.

40. For every book so borrowed a receipt shall be signed by the Member borrowing it, on one of the printed forms provided for the purpose.

41. No Member shall borrow at the same time more than three sets of books, without the special permission of one of the Honorary Secretaries.

42. Books borrowed may be retained for a month. If not asked for during this period, the loan may be renewed by the Member signing a fresh receipt.

43. All books borrowed shall be returned to the Library before January 1 in each year.

44. The Council may by special resolution sanction, on such terms as it thinks fit, the loan of manuscripts or of works reserved for use in the Library; and may under special circumstances suspend the operation of rule 39.

MISCELLANEOUS.

45. Members of the Royal Asiatic Society of Great Britain and Ireland shall be entitled to the use of the Library on the same terms as ordinary Members of this Society, and to attend the Meetings of the Society. If desirous of joining this Society, they are eligible for admission without the formalities prescribed by rule 4.

46. Any of the foregoing rules may be altered or repealed at a General Meeting provided two-thirds of the Members present shall vote for such alteration or repeal.

19 NOV. 92

BRITISH MUSEUM NATURAL HISTORY

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, COLOMBO, CEYLON.

JOURNAL

OF THE

CEYLON BRANCH

OF THE

ROYAL ASIATIC SOCIETY.

As the List of Members furnished to the Editing Secretary needs much revision, it has been omitted from the present Number of the Journal.

EDITED BY THE HONORARY SECRETARY.

The design of the Society is to institute and promote inquiries into the History, Religions, Languages, Literature, Arts, and Social Condition of the present and former Inhabitants of the Island, with its Geology and Mineralogy, its Climate and Meteorology, its Botany and Zoology.

COLOMBO:

H. C. COTTLE, ACTING GOVERNMENT PRINTER, CEYLON.

1893.

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1892.

VOLUME XII.
No. 43.

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JOURNAL

OF

THE ROYAL ASIATIC SOCIETY,

CEYLON BRANCH.

Council Meeting.

Colombo (Fort) Library, March 15, 1892.

Present :

The Lord Bishop of Colombo, President, in the Chair.

Mr. W. H. G. Duncan.
Mr. Staniforth Green.
Mr. W. P. Ranasinha.
Hon. A. de A. Seneviratna.
Mr. Geo. Wall, F.L.S., F.R.A.S., Vice-President.

Mr. E. S. W. Senáthi Rája, Honorary Secretary.
Mr. Gerard A. Joseph, Assistant Secretary.

Business.

1. Read and confirmed Minutes of Council Meeting held November 12, 1891.

2. Resolved,—That the following candidates for admission as Resident Members be elected, viz. :—

Mr. R. W. Lee, C.C.S.
Mr. A. H. Monerasinghe.
Mr. H. Pedro Perera.
Mr. R. O. S. Morgan.
Mr. J. W. F. Gore.
Mr. S. Moonesinghe.
Hon. J. A. Swettenham, C.C.S.

3. Read and passed draft of the Annual Report of Council for 1891, subject to certain amendments.

4. The Assistant Secretary reported that under Rule 16 the following Members lost their seats by reason of seniority: Dr. Trimen and the Hon. P. Rámanáthan; and by reason of least attendance: Messrs. H. H. Cameron, J. P. Lewis, the Hon. T. B. Pánabokke, and the Hon. Col. F. C. H. Clarke, none of whom had attended any Meetings.

Resolved,—That Dr. Trimen and the Hon. P. Rámanáthan be nominated for re-election for 1892, and that the Hon. T. B. Pánabokke and Mr. H. H. Cameron be deemed to have retired by reason of least attendance.

5. Resolved to nominate the following Office-Bearers for 1892, subject to their consent to serve:—

President.—The Right Rev. R. S. Copleston, D.D., Lord Bishop of Colombo.

Vice-Presidents.—Mr. George Wall, F.L.S., F.R.A.S., and the Hon. J. A. Swettenham, C.C.S.

Council.

Mr. Staniforth Green.
Dr. Henry Trimen.
Col. Hon. F. C. H. Clarke, R.A., C.M.G.
Mr. W. P. Ranasinha.
Mr. Henry Bois.
Mr. A. M. Ferguson, C.M.G.
Hon. P. Rámanáthan, C.M.G.
Hon. A. de A. Seneviratna.
Mr. J. P. Lewis, C.C.S.
Mr. F. H. M. Corbet.
Dr. W. R. Kynsey, C.M.G.
Dr. W. G. Vandort.

Honorary Treasurer.—Mr. W. H. G. Duncan.

Honorary Secretaries.—Messrs. H. C. P. Bell, C.C.S., and E. S. W. Senáthi Rája.

ANNUAL GENERAL MEETING.

Colombo Museum Library, March 19, 1892.

Present:

The Lord Bishop of Colombo, President, in the Chair.

His Excellency Sir E. Noel Walker, K.C.M.G., Vice-Patron.

Hon. M. C. Abdul Rahiman, M.L.C.
Rev. W. Charlesworth.
Mr. E. C. Davies.
Mr. N. A. W. de Livera.
Mr. W. H. G. Duncan.
Mr. C. M. Fernando.
Mr. Staniforth Green.
Dr. W. G. Keith.
Mr. F. H. Modder.
Mr. F. C. Roles.
Mr. W. A. de Silva.
Mr. H. F. Tomalin.
Dr. W. G. Vandort.

Mr. E. S. W. Senáthi Rája, Honorary Secretary.
Mr. Gerard A. Joseph, Assistant Secretary.

Visitors:—Five ladies and several gentlemen.

Business.

The Minutes of the General Meeting held on December 10, 1891, were read and confirmed.

2. The Honorary Secretary announced the election at the last Meeting of the Council of the following gentlemen as Resident Members of the Society, viz.:—

Mr. R. W. Lee, C.C.S.
Mr. H. Pedro Perera.
Mr. J. W. F. Gore.
Mr. A. H. Monerasinghe.
Mr. R. O. S. Morgan.
Mr. S. Moonesinghe.
Hon. J. A. Swettenham, C.C.S.

3. The following Report was read :—

ANNUAL REPORT FOR 1891.

THE Council of the Ceylon Branch of the Royal Asiatic Society have the honour to lay before this Meeting their Annual Report for the year 1891.

Meetings.

Four General Meetings of the Society have been held. The first Meeting (at which the Annual Report for 1890 was read) was held only on the 14th of May, it having been found impossible from a variety of causes to hold any Meetings earlier in the year.

The following is a list of the Papers read, viz. :—

(1) A Translation from the Dutch by Mr. F. H. de Vos of extracts from a work by C. A. L. van Troostenburg de Bruyn, relating to the History of Ceylon between the years 1602–1795, entitled *De Hervormde Kerk in Nederlandsch Oost-Indië Onder De Oost—Indische Compagnie.*

(2) A Paper (the fourth of a series) contributed by Mr. George Wall, Vice-President of the Society, on "A History of the Ancient Industries of Ceylon."

(3) "Notes on Eggs and Nests of the *Brachypternus Ceylonus* and *Tockus Gingalensis*," by Mr. Frederick Lewis.

(4) A Paper on "A New Method of Preserving and Mounting Zoological Specimens," by Mr. Amyrald Haly, Director of the Colombo Museum.

(5) "Ribeiro's Account of the Siege of Colombo in 1655–56," a translation from the Portuguese, by Mr. Donald Ferguson.

(6) "Buddhist Ruins near Vavuniya," by Mr. J. P. Lewis, C.C.S.

(7) "A Contribution to Sinhalese Plant Lore," by Mr. W. Arthur de Silva, of the School of Agriculture.

It will thus be seen that there have been read at the Meetings seven Papers, which cover several of the branches of research for the promotion of which the Society was mainly founded.

Members.

The Society counts now an unprecedentedly large number of Members on its roll. Of the total number 258, 7 are Honorary Members, 16 Life Members, and 235 Ordinary Resident and Non-Resident Members. There have been added during the past year the following 20 Ordinary Members, of whom 19 are Resident and 1 is Non-Resident, viz.:— Messrs, J. W. C. de Soysa, A. J. R. de Soysa, C. E. H. Corea, Walter Pereira, J. W. Seneviratna, A. Mendis Gunesekara, Mudaliyar, J. B. M. Ridout, A. D. Renganathan, J. M. Chitty, T. Sanmogam, J. P. Samarasekara, G. Grenier, T. Cooke, E. A. Muttukumaru, W. H. Dias, A. Visuvalingam, S. F. Nagapper, and J. Lemphers.

The one Non-Resident Member elected is Pandit Gopi Nath, Editor of the *People's Journal*, Lahore.

There has been one withdrawal from the Society, that of Dr. M. Eliyatamby, who has tendered his resignation.

The Council note with satisfaction that almost every month applications continue to be received for admission as Members—a fact which it is hoped indicates that the objects for which the Society exists are beginning gradually to be better understood, and its usefulness more fully appreciated by the public than hitherto.

The Council have the mournful duty of recording the loss which the Society has sustained by the death of four of its Members, viz., Sir J. F. Dickson, K.C.M.G., Mr. C. H. de Soysa, Mr. F. R. Sabonadiére, and Mr. P. Daendliker. In Mr. C. H. de Soysa the whole Island has lost a most public-spirited and munificent citizen. Sir J. F. Dickson was intimately connected with the Society at one time. In him the Society has lost a most energetic and distinguished Member, who, as its President, acted his part with an ability, zeal, and devotion above all praise. As a Páli scholar, Sir J. F. Dickson had made his mark.

Library.

The number of volumes added to the Society's Library during 1891 was 334. Only a few books, chiefly relating to archæology, have been purchased. All the rest have been obtained by exchange with learned Societies, or by presentation from the Government of Ceylon, the Secretary of State in Council for India, and the Government of the United States.

With the constant increase in the number of the Society's books, want of space and accommodation has been felt for

some time past. The Committee of the Colombo Museum recognising the congestion now apparent everywhere in the building, has, however, with commendable promptitude, recommended the extension of the eastern wing of the Museum. It is to be hoped this greatly needed extension will be an accomplished fact before long.*

The want of additional room for the books of the Society is second only to the necessity for a Catalogue of the Books of the Library. Ten years ago (1882) the preparation of a Catalogue was undertaken and carried out by two Members (Messrs. H. C. P. Bell and W. E. Davidson), and proved of much service. But the edition published was too small, and the Catalogue is now out of print. Even were this not the case the acquisitions made during the past decade would call for an addendum. The Council would appeal to some Member, or Members, resident in Colombo, with the needful leisure, to confer a real boon on the Society by following the lead set by the unselfish framers of the last Catalogue. The issue of a simple Catalogue of the Society's Books would meet all practical wants; the compilation of a more ambitious Catalogue (contemplated in the Annual Report for 1890) being left for the Museum authorities to carry out jointly with their own.

Journals.

The great and growing delay in the issue of the Society's Journal and Proceedings, for which the Council readily admit neither the editing Secretary nor the Government Printer are in any way to blame, is due to a variety of untoward circumstances, and was generally felt to need some effective remedial action. The Hon. Treasurer and Hon. Secretaries were desired to jointly devise some scheme whereby the issue of the Journal might be expedited. As the result of their report, which met with the approval of the Council, it was decided that the Journal and Proceedings (which have hitherto contained respectively Papers read and accounts of Meetings) should be published together under the designation of the "Journal of the Ceylon Branch of the Royal Asiatic Society."

The amalgamation of the Proceedings and the Journal offers the following advantages:—

(*a*) Its appearance will be improved.
(*b*) It will be more handy for readers.
(*c*) It will entail less labour to edit.
(*d*) It can be issued expeditiously.

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* Rs. 40,000 for building one wing on to the Colombo Museum has been inserted in an Ordinance, which only requires to pass the Legislature.

It is preferable to find the report of the discussion on a Paper printed in immediate connection with the Paper itself, instead of having to turn to separate Proceedings for the arguments adduced.

It also detracts from the value of a Paper if criticisms made upon it by Members are not published with it. The Proceedings when inserted in their proper place in the Journal are more likely to be read than when published separately.

In pursuance of the new system the Proceedings of each Meeting held during 1891, together with all Papers read thereat, and notes of any discussions which ensued, have been promptly sent to press as soon after the Meetings as possible. By this means Members will, it is hoped, have in their hands a complete record of the entire work done in the course of the preceding year very shortly after its close.

The Council views this improvement both in the form of the Journal, commencing with Vol. XII., and in the promptitude of its issue, with unmixed satisfaction, and desires to congratulate the Society on the prospect of a final solution having been found to the question of delay (unavoidable under the old system), which has been of late years the source of much and not unnatural discontent.

The thanks of the Society are due to the Government Printer and his Assistants for their never-failing readiness to serve the Society in connection with the printing of the Journal and Proceedings of the Society.

Archæology.

Interest under this head naturally centres in the Archæological Survey of the Island, the initiation of which was among the many projects due to the wide-reaching administration of Sir Arthur Gordon and his Government. There is every reason to believe that the survey, as at present limited to Anurádhapura and the North-Central Province, is being prosecuted with vigour, and on a scale commensurate with the Government vote devoted to the purpose. The quarterly Progress Reports furnished to Government by the Archæological Commissioner speak to good work done. As exploration proceeds outwards the officers of the Survey Department detached for the survey of the ruins keep pace *pari passu*, carefully noting all ancient landmarks, roads, bridges, tanks, &c. A reliable plan of the ancient city is thus being gradually laid down, so far as the forest growth of centuries and the hand of time permit of the remains being laboriously traced out.

Excavation with a small labour force is necessarily limited to a few sites likely to yield profitable results towards a better understanding of the style of architecture and grouping

of sacred buildings which prevailed in ancient Anurádhapura. In this view particular attention has been paid during the past year to a fine monastery known as *Vijayaráma*, buried in forest, one mile and a half north of the *Jétawanaráma* ruins, the furthest bound of continuous clearing. The whole of the monastery has been thoroughly excavated from end to end, and much valuable information thus gained of the construction, relative position, and inter-connection of the several shrines, &c., within the monastery walls. The ancient road between these ruins and *Jétawanaráma* has been traced and surveyed, as well as the still more important road which, according to the *Maháwaṉsa*, connected Mihintalé with the capital. This latter discovery alone is of very great interest, and shows that exploration is being pushed on steadily far afield. Attention is also being devoted to other portions of the ancient city and its environs, the Abhayagiri neighbourhood, the recently cleared block of ruins at Paṉkuliya on the banks of the Malwatu-oya, and a very extensive monastery (quite the largest yet discovered outside Anurádhapura) two miles away on the Jaffna road.

In short, the expansion of the archæological survey is alone kept back by the comparatively small sum which can be legitimately spared for such an object by the Ceylon Government, having due regard to other more pressing Island needs. An undertaking so vast as the complete excavation of Anurádhapura demands the expenditure of a large sum annually. It would be well if some Antiquarian Society in Europe willing and pecuniarily able to carry on the work would take a practical interest therein, so that it might be conducted on a far more extensive scale than is at present possible.

Finances.

The following is a statement of the income and expenditure of the Society during the past year.*

The Hon. Mr. ABDUL RAHIMAN proposed the adoption of the Report.

Mr. ROLES, in seconding it, inquired when they might expect to have a Catalogue of the Books.

Mr. SENÁTHI RÁJA, the Honorary Secretary, replied that no steps had yet been taken to prepare a Catalogue, but they hoped to be able to do so soon.

Mr. FERNANDO next moved that the following gentlemen be elected Office-Bearers for the current year :—

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* See page 204.

President.—The Right Rev. R. S. Copleston, D.D., Lord Bishop of Colombo.

Vice-Presidents.—Mr. George Wall, F.L.S., F.R.A.S., and the Hon. J. A. Swettenham, C.C.S.

Council.—Mr. H. Bois; Col. the Hon. F. C. H. Clarke, R.A., C.M.G.; Mr. F. H. M. Corbet, M.R.A.S.; Mr. A. M. Ferguson, C.M.G.; Mr. Staniforth Green; Dr. W. R. Kynsey, C.M.G.; Mr. J. P. Lewis, C.C.S.; the Hon. P. Rámanáthan, C.M.G., M.L.C.; Mr. W. P. Ranasiṅgha; the Hon. A. de A. Seneviratna, M.L.C.; Dr. Henry Trimen, M.B., F.R.S.; Dr. W. G. Vandort.

Honorary Treasurer.—Mr. W. H. G. Duncan.

Honorary Secretaries.—Messrs. H. C. P. Bell, C.C.S., and E. S. W. Senáthi Rája.

Mr. E. C. DAVIES seconded, and the motion was carried unanimously.

During the election of the Office Bearers His Lordship the Bishop vacated the Chair, which was occupied by Sir E. N. Walker.

4. His Lordship the Bishop again took the Chair amidst applause, and on behalf of himself and the other gentlemen who had been honoured by election or re-election tendered his best thanks to the Meeting. He said he would not pretend that he himself was at all proud of the manner in which the officers of the Society, so far as their public appearances went, had discharged their duties. He was quite conscious himself of having neglected his, and he felt that they should cut but a bad figure unless it were known to the Members of the Society that a good deal of work had been done out of sight, that a good deal of really useful, laborious work had been done by the Secretaries in the matter of printing and choice of books to be purchased for the Society, and that a most arduous work had been admirably and diligently carried through by the Treasurer. But he confessed that as regarded their appearance at Meetings they ought to have both a greater number of Meetings, and those Meetings which they did have more lively than some of them had been. With regard to the number of Meetings and efforts to procure Papers the Council were no doubt in a great measure responsible, but he must remind the Members of the Society that the preparation of Papers and the giving of life to the Meetings remained mainly with the Members themselves. He was sure he spoke what the Council would wish him to say when he asked them to do their utmost to contribute Papers to the Proceedings of the Society. What he was going to take the opportunity of saying bore, to some extent, upon that matter, and was a suggestion in that direction.

5. His Lordship the BISHOP delivered an address entitled—

THE VERIFICATION OF THE ANCIENT CHRONICLES AND HISTORIES OF CEYLON.

AMONG the methods by which the objects of this Society may be attained, I have always been inclined to give prominence to the method of combined work. It is for combination, as distinguished from individual study, that a Society affords special opportunities. And it is obvious that results can be attained by combination, which would be impossible to solitary study. Not many of us are qualified to prosecute the several branches of inquiry which bear on one point, and are necessary to establish a conclusion even on one point, though it be but a minor point. And of those who are qualified, perhaps not one has the necessary leisure. But if some line of study is plotted out—so to speak—to which any Member of the Society can contribute just what comes in his way, as he can and when he can, knowing that it will come into the common stock and be worked up with the rest, then those who have little leisure, or who can touch only one branch of inquiry, may all take part.

As some Members of the Society may remember, I made suggestions of this kind some years ago in regard to two subjects, the *Játakas* and the collection of *Siṇhalese Glossaries*. These were not altogether unfruitful, but less fruitful than some other topics might prove. They were not altogether unfruitful, for we managed to put together a number of Papers by four or five contributors on the first fifty Játakas, and the result was not bad, so far as it went; and as to the Glossaries, a start was made, and a scheme drawn up, which I yet hope to see carried further. Just when that scheme was drawn up, I, for my part, was invited—and thought myself bound to accept the invitation—to another work, which has till now occupied my leisure time. But both topics were rather too limited to secure any wide co-operation: they were necessarily limited to Páli and Siṇhalese scholars.

Without abandoning these, I suggest to-day another object of combined work—*The Verification of the Native Chronicles and Histories of Ceylon.* Of the materials necessary for this, by far the greater part is accessible to the English reader. It is one of the peculiar distinctions of the Island, that from early times it has possessed historians. The Sinhalese stand alone, or almost alone, among Indian peoples, as having had an interest in history. Their chronicles are the oldest, I believe, and for centuries the only instances of histories in the Indian world. The Continent had its great epic poems; but in these, though they had no doubt some foundation in fact, the fiction was the chief part,—the facts are not commemorated from the annalist's point of view, but from the poet's. The Sinhalese chronicles are distinctly historical in form, not epical.

Now the inquiry I propose is the important one: *To what extent are the Sinhalese histories true?* There is certainly obvious fiction mingled with statements of fact. Putting the obvious fiction apart, are the statements of fact trustworthy? The dates, the names of persons, the wars, the buildings, the social and religious conditions,—in regard to these, to what extent can we rely on our authorities? This is not a question that can be answered in one word, by saying they are trustworthy or they are not. It is all but certain that they will be found more trustworthy for one period than for another; more to be trusted about one class of fact than about another; trustworthy within certain limits, and not beyond them. I propose that we should bring together, little by little and in course of time, all the evidence by which they can be tested.

There are several different kinds of tests, of which I will mention three kinds which occur to me as the chief. First, the histories are to be tested by existing buildings, monuments, and inscriptions. If the history says a building was erected by such a king in such a year, and we find upon it an inscription —evidently contemporary—to the same effect, we know that the historian had access to correct information on that point. Secondly, by comparison with independent literary records. If our history describes a certain state of things as existing at

a given date, and in a book written by some one else quite independently the same state of things is described under the same date, the accuracy of the historian is established. Thirdly, the history is tested by examination of its own contents. If it contradicts itself, if in an early chapter something is referred to, which in another place of the same book we read came into being much later,—if there are contradictions and anachronisms,—the history is so far discredited.

Of these three, it is to the first two heads that most can be contributed. As to the test of inscriptions and monuments, there are so many of these in Ceylon, and they do so often illustrate or support the histories, that a great deal may be done in noting these verifications. For instance, the *Mahâwaṃsa* tells us that King Parakrama II. in the thirteenth century cleared the road from the Kandy side to Adam's Peak, with particular reference to Ambagamuwa. In Ambagamuwa there is now a stone recording the precautions taken for keeping that path clear. If Mr. Bell* finds on that stone proof of its having been set up by the very king—I do not know whether this is the case or not—whom the *Mahâwaṃsa* specifies, the history is so far confirmed : for the reign of that king at any rate the author had access to trustworthy materials. If of the same king it is related that he planted fruit trees in a certain part of the district of Bentota, and those who are familiar with that district find that there are indications of its having been very early planted, the history is so far confirmed.

And here I will suggest, though out of its place, a possible test connected with trees. I do not know when the cocoanut was introduced into the Island. But our historian says a good deal about cocoanuts in connection with the reign of the same Parakrama II. in thirteenth century (chap. LXXXVI.). Can we trust the history securely enough to say that the cocoanut had certainly been introduced as early as that, or shall we find from other sources that it was introduced later, and so convict the author of the *Mahâwaṃsa* of writing from imagination ?

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* Archæological Commissioner for Ceylon.

Of the verification of the chronicles by comparison with independent writings or histories I propose to give some more detailed illustration, but first I must say, for the benefit of any Member of the Society—if there be any—who does not know it, what are the histories or chronicles to which I refer, and what are the claims which they make to historical character. It is very important to know what materials the writers *claim* to have had access to.

There are the old Páli chronicles, the *Dípawaṇsa* and *Maháwaṇsa*, of which we may say roughly that they date in their present form from about 400 A.D.; and there are the Siṇhalese chronicles, the *Rájavaliya* and others, which are much later, of uncertain beginning. Both Páli and Siṇhalese books have been continued, of course by many different hands, down to the present century. I am going to touch only the earlier, *the Páli histories.*

The *Maháwaṇsa*, or Great History, is in Páli verse, and consists, in its complete form, of about one hundred chapters, varying in length, but averaging I suppose about two hundred couplets to the chapter.

The original issue, about 400 A.D., consisted of the first thirty-seven or thirty-eight chapters (it is not quite certain exactly where it left off), and contains the tradition or the history (you will see presently why I use two words) of the whole period from the time of Buddha, or—which is the same thing—from the landing of Vijaya to the date of the author, or one not long before it: roughly, from the sixth century B.C. to the fifth century A.D. It was compiled at the end of the period, of nearly a thousand years, of which it treats.

What materials does the author profess to have had access to? He composed his work, he tells us in his prefatory lines, from tradition and from previous chronicles made by "the ancients." And the Commentary, or Tíká, probably written also by the author himself, adds that the materials were taken from the Siṇhalese books (*Aṭṭhakathá*, books illustrative of, or introductory to, the sacred books of Buddhism)—his materials were taken from these Siṇhalese Buddhist

works, which were in the possession of the monks of the *Maha-vihára*, Great Monastery, of Anurádhapura. By those monks and their predecessors, who are doubtless the people the author calls "the ancients" (under which name they are constantly referred to by Buddhaghosha also), by those Buddhist monks of the *Maha-vihára*, the materials were collected and handed down, on which the author of the *Maháwaṅsa* relied. This is his claim to have access to sound materials.

What is the extent of that claim taken at its very largest? At its very largest it runs back to the foundation of the *Maha-vihára* ("Great Monastery"). Before that, the author makes no pretence whatever to have had historical materials. How could the *Maha-vihára* monks have kept records of what occurred before their institution was founded, before there was a monk in Ceylon, before Buddhism had been introduced into the Island? The *Maháwaṅsa* does not even claim to rest on historical materials, except after 250 B.C. About 250 B.C., speaking roughly, Buddhism was introduced into the Island the "Great Monastery" was founded, and the recording of events began. With the three centuries before that the life of the "Great Monastery" was in no sense continuous. It came over, so to speak, from India. Its founders knew nothing of the history of Ceylon; they were strangers. All that they could know, even if they set themselves to inquire, would be collected from the memories of living men, and from such traditions as were cherished among the previous inhabitants, a non-Buddhist, uncultivated, unhistorical people.

It cannot be too decisively affirmed that *history in Ceylon began with the introduction of Buddhism.* The previous inhabitants of Ceylon are not more likely—but even less likely—to have kept records than any other non-Buddhist Indian people. When we look at the contents of those early chapters which contain the traditions of the three centuries between Vijaya and Mahinda—the pre-Buddhist period—we find them just what we should expect. There are particulars which have the look of facts about the father and the grandfather of the reigning king; before that time—before

Tissa's grandfather—there is scarcely anything but fairy tales and fantastic stories about beautiful princesses.

It has been urged in support of these early chapters that the illustrious Turnour described the *Maháwaṇsa* as a trustworthy history. But Turnour would never have said that it was equally trustworthy throughout. In fact, what Turnour does say (p. lx.) is this:—"From the date of the introduction of Buddhism into Ceylon in 307 B.C. that history is authenticated by the concurrence of every evidence which can contribute to verify the annals of every country." This I think is too strong a statement, even for the period to which it refers; but most emphatically I maintain, for the reasons I have given, that whatever may be established as to the credibility of the Buddhist chronicles, will not go to establish in any appreciable degree their value for *the pre-Buddhist period.*

But to return. This first instalment of the history—for the *Dípawaṇsa* is an earlier and rougher compilation from the same materials as the *Maháwaṇsa*—was issued in the fourth century or soon after the end of it. From that time to about 1300 A.D. (the reign of Parakrama Báhu IV.) it was continued, we know not by whom or with what intermissions. It may be that it was constantly added to—after one reign or after eight short reigns, chapter by chapter—or it may be that only at long intervals a large piece was written up: we are not told. But we are told that from 1300 A.D. it was intermitted. Four hundred and fifty years later Kirti Ṣri Rája Siṇha ordered it to be written up to date. How far it was then written up from imagination and how far there were public records out of which it could be authentically written up, this is a very interesting question, and one which we are not without materials for answering. From 1750 A.D. to the occupation of Kandy by the English, forms, so to speak, a third part. By how many hands or at what dates this was compiled I do not know.

Now for the tests of which I have promised to give specimens. We have means of testing the history, with varying degrees of accuracy, at or near each of the critical periods: the foundation of Anurádhapura—that is, at the point when the

claim to historical materials begins: the beginning of the fifth century, close upon the issue of Part I.: and during Part II., that is, the part written up in 1750 A.D. For the period since 1750 A.D. there are of course abundant means of verification.

What are these tests? For the beginning, *the edicts of Aṣóka*, the great Indian Emperor, inscribed on rocks and pillars about India; for about 400 A.D. *the travels of Fâ Hian*, the Chinese pilgrim, who then visited Anurádhapura; and for the latter part of the seventeenth century (besides all the *Portuguese* and *Dutch* works) *the account of Robert Knox*.

The *Maháwaṉsa* and *Dípawaṉsa* tell us that it was Aṣóka Piyadasi who sent Mahinda to establish Buddhism here, in the reign of the Siṉhalese King Tissa. They fix the date of this, and say a great deal both about Aṣóka and about the mission of Mahinda. Aṣóka is a person whose place in history is fixed with certainty by his coming into contact with European history by his relations with several Greek kings, whom he mentions: he is also a person whose acts and views are well known to us from his writings—writings which may almost be called voluminous—on the rocks and pillars to which I have referred. The date of his anointing, or, as we should say, coronation, was 270 B.C., and his edicts were issued between 260 and 230 B.C.

With this date the *Maháwaṉsa* does not exactly agree: it is about sixty years out. Of this discrepancy a very probable explanation has been suggested, and the error is probably little more than a miscalculation. But even supposing the date to be sixty years out, it was impossible for a writer six centuries later to get even as near as that to it if he had not definite records to rely upon.

Apart from the question of date, the representation which the *Maháwaṉsa* gives of Aṣóka is verified by his own edicts, both in general and in detail. The names of his father and grandfather, and that his grandfather was the first of the dynasty, set up by a certain Brahman—these points are confirmed by the Greek historian. That he was not always a Buddhist, but was converted to Buddhism after his consecra-

tion; that he made great efforts for the promulgation of Buddhism, which reached as far as Ceylon—in these main points the edicts bear out the chronicle. That in his time a council or assembly of Buddhist monks for settling the text of the sacred books was held, this the edicts do not say; but there is much in them, in particular the king's increasingly definite acquaintance with the technicalities of Buddhism and with definite books, and his respectful relations with the monks of Magadha—there is much, I say, that is more than compatible with such a council.

But the veracity of the *Maháwaṅsa* in a particular detail has been confirmed from another source, which may well be reckoned with the edicts of Asṓka, namely, the relic-box found by General Cunningham in the dágaba at Sanchi. This box must date not much later than 200 B.C., and it bears the name of "Majjhima, the teacher of the Himavat." Now the *Maháwaṅsa* enumerates the persons who were sent in Asṓka's time by Moggali, the chief of the Buddhist community, to different countries, and among them specifies Majjhima as having been sent to the Himavat.

This is alone enough to prove that the writer of the *Maháwaṅsa* had access to detailed and reliable history of the latter part of the third century. It bears out the statement of his preface and commentaries that he drew his materials from the archives of the monks of the "Great Vihára" in Anurádhapura; and renders it, I think, impossible to suppose him mistaken when he attributes the foundation of that monastery to *Mahinda*, the son of Asṓka.

At the same time it will be seen that this striking verification, concerned as it is entirely with Mahinda, Asṓka, and Asṓka's ancestry in India, does not afford any presumption whatever that there were records kept in Ceylon before Mahinda came or the *Mahá-vihára* was established.

Compared with this the verification supplied by Fâ Hian, the Chinese traveller, is slight; and what is more, it is not much needed, because the date of his visit was very near to—a little previous to—that of the publication of the *Maháwaṅsa*

itself: that is, Fâ Hian came at a time for which we know for certain that the chronicler's history was nearly contemporary. Still it is interesting to notice their agreement.

From considerations into which I cannot now enter, I think the date of his visit may be fixed with probability to the earliest years of the reign of King Mahanama, about 412 A.D. Those, we learn from the *Maháwan̥sa*, were the flourishing days of Anurádhapura. The kings of that period were accomplished—some in art and some in science; literature was thriving, as the *Maháwan̥sa* itself proves; sculpture especially and images are mentioned; and the stimulus which had promoted these was intercourse with India, of which intercourse the bringing of the tooth-relic by a Brahman princess and the visit of the great commentator, Buddhaghósha, were illustrations. Further, about this period the rivalry ran very high between the two principal monastic establishments of Anurádhapura, the *Mahá-vihára* (from which the *Maháwan̥sa* issued) and the Abhayagiri Vihára, each in turn obtaining the pre-eminence and securing royal patronage, though several, perhaps most of the kings, are represented as patronising both.

Fâ Hian begins by repeating what he learnt of the tradition about the early inhabitants of Ceylon and of the visits of the Buddha to the Island, just as they are recorded in the *Mahá-wan̥sa*. Then he describes the magnificence of the dágabas and the vast number of the monks in the viháras to which these dágabas belonged. He was most impressed by the Abhayagiri Dágaba: it was forty cubits high and adorned with gold and silver and precious stones. In its monastery there were 5,000 monks. The *Mahá-vihára* held in his eyes quite a secondary position, though it had 3,000 monks. But a monk of very high attainments had just died then, and there was living at the Chaitya Hill (long afterwards called Mihintalé), which also belonged to the *Mahá-vihára*, a famous monk, Dhammagutta. He speaks of the viháré of the Tooth, and gives a long account of the *perahẹra*—or carrying round in procession—of the Tooth, but it is at the Abhayagiri, not at the *Mahá-vihára*, that he describes the chief ceremonies as

taking place. Among the splendours of the city, which was all well built and well kept, he admired specially an image of the Buddha, twenty cubits high, made of green jade. This may well have been one of the very images specified in chapter XXXVII. of the *Maháwan̥sa*, and it was made of green jade, a material which is not to be obtained, I believe, in any quantity in Ceylon, and which must therefore have been brought from India. It is interesting, I think, to notice, though it cannot surprise us, how closely the picture given by this intelligent visitor agrees with the narrative of the native historian.

From the fifth century I leap to the seventeenth. The testimony of Robert Knox is the more remarkable because it bears upon the period for which—as I have already remarked—the versified chronicle was not contemporaneous. If it is found to support the versified chronicle, it will prove that the latter was made from contemporaneous records. Knox was detained in the Kandyan country from about 1660 to about 1680. He gives a very full account of the person, character, habits, and policy of the king Rája Sin̥ha II., tells us where the king lived, and describes his relations with the Portuguese and with the Dutch. He reports the condition of many of the towns, Kandy, Badulla, Anurádhapura, and Aḷutnuwara; describes the customs of the people, and gives a very vivid picture of their religion as he saw it. In all this he may be said on the whole to confirm the *Maháwan̥sa*—not indeed in its estimate of the proportion of things, but in its general representation of events and facts. The *Maháwan̥sa* gives of Rája Sin̥ha a less unfavourable account than Knox. Knox describes him as a tyrant of diabolical brutality and cruelty, but not without very considerable capacities for governing, of great personal strength and activity, and a warlike and fearless temper. The *Maháwan̥sa* calls him (XCVI.–6) "an imperious man, whom none could approach or conquer, and brave as a lion, courageous, endowed with great strength of body, and tells several anecdotes of his athletic feats." And again, "an imperious ruler." But it gives him credit for great zeal for Buddhism,

protecting the religion, &c.; while Knox gives one the impression that he cared little for it, and, in fact, preferred Christians, as being more trustworthy, to Buddhists: still he practised Buddhism outwardly and gave gifts. Some of the difference may be explained by the supposition that the part of Rája Sin̥ha's reign on which the *Mahávan̥sa* dwells is the earlier part, in which his struggles were against the Portuguese. Knox was there in the latter, when it was the Dutch who were the enemy. In fact, I think it is probable that either the burning of Kandy or the great rebellion in 1665, which drove the king away, also broke up the office of the king's recorder and scattered the historians. These disasters are mentioned by Knox, not by the *Mahávan̥sa*. The *Mahávan̥sa* doubtless exaggerates Rája Sin̥ha's successes against the Portuguese, laying emphasis only on his victories. But it admits that the "wicked unbelievers, after their defeat," began again to plunder the districts, and that the king went to Dighavápi, in the eastern part of the Island. There, the historian tells us, he destroyed a Portuguese fort and gave it to the Dutch. The victories of the Dutch are credited to Rája Sin̥ha; for he is said to have destroyed the forts all round the Island, and utterly destroyed and expelled the Portuguese. This refers to what took place in the earlier part of his reign, before Knox's time. "He established"—says the native history—"the people of Olanda in places bordering the sea, that they might guard Lan̥ka and hinder the enemy. And he commanded them to come to him every year with presents." Knox most curiously confirms—not this view of the case, but the statement that this was the Sin̥halese view of the case. He tells us that the Dutch took great pains to flatter the king, and to persuade him that they were in Ceylon merely as his servants and messengers. "The Dutch knowing his proud spirit make their advantage of it by flattering him with their ambassadors, telling him that they are his majesty's humble subjects and servants, and that it is out of their loyalty to him that they build forts and keep watchers round about his country to

prevent foreign nations and enemies from coming, and that they are thus employed in his majesty's service; so it is for sustenance which they want that occasioned their coming up into his majesty's country." Knox tells us that Kandy had been burnt by them, and that the king lived, all the latter part of his reign, in Héwáheṭa (probably at Hanguranketa) in retirement. The *Maháwaṇsa* says nothing of this except that the king went to the east part of the Island. But in its silence it agrees with Knox; for it never mentions this king's being at Kandy or building anything there.

In Knox's minute account of the *perahera* at Kandy there is no allusion to the Tooth, nor is there any reference to it in all his descriptions of the religion, though he specifies the *Bó*-tree and the Foot-print. It is quite certain in fact that he had never heard of the Tooth. The *Maháwaṇsa* tells us that Rája Siṇha's father had placed the Tooth in safe hiding. Whatever may be the truth about that—whether the Siṇhalese or the Portuguese account of its fate be correct—the *Maháwaṇsa* admits that it was not in Kandy.

Such are some illustrations of the work of verifying or testing our Island histories, in which I invite the Members of this learned Society to combine. The instances which I have chosen are no doubt among the most striking, but each of them requires fuller and more exact treatment than I have given it, and there are many more lodes to be worked even in the same mine. Then there is the wide field of buildings, monuments, and inscriptions to supply new tests for these Páli histories, and besides these the Siṇhalese histories, which treat of the recent period and of the low-country, where they come directly under the test of the Portuguese and Dutch chronicles and records.

Of the matters I have touched upon, the whole, I believe, can be read in English; but of the *Rájawaliya* and its companions a good English translation is still, I believe, wanting. To translate the later portions of that work and compare them minutely with Ribeyro and the other European writers would be, if I am not mistaken, labour well spent.

5. The following Paper was read by the author :—

SIṆHALESE WEIGHTS AND MEASURES.*

By Frank Modder.

The Siṇhalese were not very advanced in their acquaintance with mathematics, and the extent of their knowledge of arithmetic was limited. In consequence they borrowed largely from India to supply these deficiencies, and their weights and measures are of Indian origin.†

The first attempt by the British towards establishing weights and measures according to a fixed standard was made in 1816, when by Regulation No. 3 of that year the metal standard parrah employed by the Dutch was adopted in its several proportions and subdivisions as the legal standard measure. By Regulation No. 19 of 1822 the standard weight for weighing all goods whatsoever was declared to be the English pound avoirdupois, for liquids the English wine gallon, for lineal measurement the English foot of 12 inches, and their multiples and subdivisions. The provisions of this enactment were suspended by Regulation No. 1 of 1823. By Ordinance No. 2 of 1836 the Imperial standard troy pound containing 5,760 grains troy, and 7,000 such grains were declared equal to a pound avoirdupois; the Imperial standard yard and the Imperial standard gallon, with their multiples and subdivisions, were established as the standard measures of weight of extension, whether lineal, superficial, or solid, and of capacity, from which all other measures were to be derived and computed. Ordinance No. 8 of 1876, which is

* My special thanks are due to Mr. H. M. Ekanayaka, Principal of the Kuruṇégala Buddhist School, for the invaluable aid he has rendered me in the preparation of this Paper. With his superior knowledge of Siṇhalese literature he was able to refer me to many of the standard authorities I have quoted, while his vast experience was the means of supplying me with information which I could not gather from any books. My sincere thanks I offer to Mudaliyár S. H. Jayawickreme and to Kotuwewatta Sonuthera Unnánse, for whose kind assistance and valuable suggestions with regard to this Paper I am greatly indebted.

† Davy's *Ceylon*, p. 242.

now in force, in amending the law, declared the Imperial standard pound avoirdupois as the only standard measure of weight, and one equal $\frac{17}{1000}$ part of such pound avoirdupois as equal to a grain, and 5,760 such grains as equal to a pound troy; and the Imperial standard yard as the only standard measure of extension.

Notwithstanding the adoption of the Imperial standard for Colonial weights and measures, most of their transactions are conducted by the Siṉhalese according to their own crude systems, principally with regard to the preparation of drugs and in dealings connected with the superficial extent of land.

The following general table is taken from *Abhiddhána-padípika*, and it seems to be the basis of all the weights and of most of the measures hitherto and at present in use:—

4 ví ẹṭa	= 1 gunja, or olinda seed
2 gunjas	= 1 masaka
5 masakas	= 2 akas. One aka is equal to 20 grains of paddy
8 akas	= 1 kalanda, or daraṇa
5 kalandas	= 1 suvanna, or pancha daraṇa. A weight, or coin, of gold equal to about 175 grains troy, according to Wilson. It is about the weight of five copper cents. (*Mahá-waṉsa*, chap. C. p. 358, in notes)
5 suvaṇṇas	= 1 nikka
10 palams	= 1 daraṇa
100 palams	= 1 thula
20 thulas	= 1 bara, or karisa
2 ullakuwos	= 1 pata, a measure of capacity
4 ullakuwos	= 4 nẹli, or one allakho, or 4 patas
4 allakhos	= 1 droṇa, or mani = 52 seers, or about 64 lb. avoirdupois. (*Maháwaṉsa*, chap. XXIV., p. 203, in notes)
4 droṇas	= 1 maṇika
4 maṇika	= 1 khari (or amuṇam)
20 kharis	= 1 waha
10 amuṇams	= 1 kumbha
2 lahas	= 1 allakho
2 nẹli	= 1 patho
2 yallos	= 1 waho
10 droṇas	= 1 amuṇam

I.—Apothecaries' Weight.

The medical work *Bhaisajjaya Kalpa* gives the following table :—

6 siyum-ṛenu, or faint rays	= 1	marichi, or clear ray
6 marichi	= 1	aba eṭa
6 aba eṭa	= 1	rat-eḷ, a kind of paddy
2 rat-eḷ	= 1	undu eṭa
2 undu eṭa	= 1	yava eṭa
4 undu eṭa	= 1	sána[1] *
2 sána	= 1	vataka
4 vataka	= 1	mita, or palam
4 miti or palam	= 1	kal
4 kal	= 1	neḷi
4 neḷi	= 1	kuruṇi
4 kuruṇi	= 1	droṇa
4 droṇa	= 1	waha
2 palam	= 1	pregurta
2 pregurta	= 1	kuduba, or adamana

The following table in verse is taken from the *Yogaratnákaraya*, which, according to Alwis, is "a book no less celebrated for its doctrines on medicine than esteemed for the elegance of its versification" :—

1. ත ල ඇ ට තු න ක් නම් අමුඇට එකක් වේ
අ මු ඇ ට තු න ක් නම් වියටින් එකක් වේ
අ ට වි ය ටෙ ක් නම් මදටීන් එකක් වේ
වි සි ම ද ටෙ ක් නම් කලඳින් එකක් වේ

2. තුන්කලඳට හුනකැයි පවසත නමෙ ක
දෙහුනක් ආ කලට පලමින් වෙයි අඩ ක
දෙඅඩ පලමනම් පලමින් වෙයි එක ක
දෙපලමකට පවසන්නේ කුළුඳුලෙ ක

3. දෙකුළුඳුලක් ආ කල වන්නේ පතෙ ක
සතර පතක් නම් තැඹුබෙක් වෙයි එකෙ ක
සතර තැඹුබ ලාසෙන්වන්නේ එකෙ ක
ලා සෙත් සතර නම් වන්නේ ද්‍රොණය ක

* The small figures refer to the "Notes" at p. 194 *et seq.*

Of which the following is the translation :—

3 gingelly seeds	=	1 amu seed
3 amu seeds	=	1 grain of paddy
8 grains of paddy	=	1 madeṭa[2]
20 madeṭas	=	1 kalanda
3 kalandas	=	1 huna
2 hunas	=	½ palam
2 half palams	=	1 palam
2 palams	=	1 kulundula
2 kulundulas	=	1 pata
4 patas	=	1 nẹdubba
4 nẹdubbas	=	1 laha
4 lahas	=	1 droṇa

The following is another table written from memory :—

1. තිලට තුන හමුව : තුන්හමුව වියටෙ කා
   වියට සිවුහුනිය : දෙහුනියෙද මදටෙ කා
   මදට විසි කලඳ : බරකලඳ පලමෙ කා
   දෙපලම කුළුඳුලෙක : සිවු පලමද පතෙ කා

2. ස ත ර පත නැඩුඹ : සිවු නැඩුඹ ලාසෙ කා
   ස ත ර ලාස නන් දූනගන්න ද්‍රෝණ කා
   ස ත ර පැල දසද්‍රෝණක අමුණෙ කා
   ස ත ර මුනටවේදූනගන්න කිරීයෙ කා

Which being translated reads :—

3 tala-ẹṭas	=	1 amu
3 amus	=	1 grain of paddy
4 grains of paddy	=	1 huna
2 hunas	=	1 madeṭa
20 madeṭas	=	1 kalanda
12 kalandas	=	1 palam
2 palams	=	1 kulundula
4 palams[3]	=	1 pata
4 patas	=	1 nẹdumba
4 nẹdumbas	=	1 laha
4 lahas	=	1 droṇa
4 pẹlas	=	6 droṇas
6 droṇas	=	1 amuṇa
4 amuṇas	=	1 kiriya[4]

II.—TROY WEIGHT.

The principal weight used by gold and silversmiths is the seed of the *madaṭiya*.[5] It is the weight known as a

mañchádiya. Different specimens of the seed were tried by Dr. Davy, and they varied in weight from 3 to 3·9 grains, their average being 3·6 grains. The standard weight of a *madaṭiya* is, however, fixed by the tables hereinbefore given.

12 mañcháḍis	=	1 gold pagoda [6]
42 mañcháḍis	=	1 rupee

A *mañcháḍi* in English weight is a little less than 4 grains, and a rupee weighs 180 grains.

III.—Measures of Capacity.

Whether it be apothecaries' or troy weight, land or dry measure, the starting unit is represented by 3 *tala-ẹṭas*, and the table as given before followed.

The smallest measure of quantity, whether dry or liquid, which is in everyday use, is the *hunḍuwa* and its multiples :—

4 hunḍuwas	=	1 nẹli, or séru
4 nẹli or séru	=	1 laha

Davy refers to this as a *punchi-laha*, one and a half of which go to a *loku-laha*, ten *loku-lahas* being equal to a *pẹ́la.* They apply to the Kandyan Provinces.

4 lahas	=	1 timba
10 lahas	=	1 pẹ́la
4 pẹ́las	=	1 amuṇam

These latter are in the Kandyan Provinces merely nominal to express large quantities. The *loku-laha* is the largest dry measure in actual use, and the *nẹliya* the largest liquid measure. Both kinds are employed only in measuring grain and oil. For grain the measure is made of rattan, for oil of bamboo. Pridham says, speaking of these measures, they "varied, and no two were to be found exactly alike. When these measures prevailed, standard gauges were deposited for reference in every kachchéri as a protection against fraud through defective weights—a precaution absolutely requisite, where the natives would frequently place the wooden measures in boiling water, then dry them in the sun, and complete this roguery by coating the interior surface with a thick layer of transparent dammer or pine resin."

The following table taken from the Ceylon Blue Book for 1889, Part I., shows the equivalents of the above in English standard measures :—

1 amuṇam	=	4 pẹlas
	=	40 lahas, or kuruṇi
	=	8 parrahs
	=	5 bushels
	=	20 pecks
	=	160 quarts, or seers, or nẹli
1 pẹla	=	10 lahas, or kuruṇi
	=	2 parrahs
	=	$1\frac{1}{4}$ bushel
	=	5 pecks
	=	40 quarts, or seers, or nẹli
1 laha	=	4 quarts, [8] * or seers, or nẹli
1 parrah	=	5 lahas, or kuruṇi
	=	20 quarts, or seers, or nẹli

The Dutch parrah was adopted in its several proportions and subdivisions as the legal standard measure of capacity in all transactions within the Island by Regulation No. 3 of 1816, which came into operation on the 1st of May, 1816. It was defined as a perfect cube $11\frac{57}{100}$ inches in length, depth, and breadth. It was divided into half parrah, its internal dimensions being $9\frac{18}{100}$ inches in length, depth, and breadth, and quarter parrah $7\frac{28}{100}$ in. The parrah was divided into 24 seers. Each seer was in its dimensions a perfect cylinder of a depth equal to its diameter, namely, $4\frac{35}{100}$ inches, and divided into subdivisions of half and quarter seer, the same being cylinders whose depth and diameter were $3\frac{45}{100}$ inches and $2\frac{74}{100}$ inches, respectively.

The weight of the parrah measure, according to the Custom-house account, was for coffee from 35 to 60 lb.; pepper 27 to 30 lb.; salt 52 to 55 lb.; paddy, rice, and husk, 30 to 33 lb.; rice 42 to 46 lb.; candy or bahar, 500 lb. avoirdupois or 461 lb. Dutch troy weight.

One amuṇam is equal to 5 bushels, if 32 seers be reckoned to the bushel, but if each seer is "pressed down," as it is called, only 28 seers go to the bushel.

The cut-measure was legalised by Regulation No. 3 of 1816. It declared that the legal contents of the measures in all transactions should be those remaining in the measure level with the rim or edge after the same had been struck or cut by a straight rod or strike mounted with iron, resting upon the edges, and that in no case was it lawful to demand that any such measure be heaped or added to. Measures were sold at the kachchéries at specified rates, and each was accompanied with a strike mounted with iron to prevent all disputes about the cutting.

In order that the relative proportions of the said measures to each other and to the measures of greater dimensions might be generally understood, the following table was laid down :—

24 cut seers	=	1 cut parrah
8 cut parrah	=	1 amuṇam
$9\frac{3}{8}$ amuṇams	=	1 last
$2\frac{2}{3}$ last	=	1 garce

The following table is adopted at the present day :—

Cut chundus		Cut measure										
4	=	1		Kuruṇi								
$16\frac{1}{5}$	=	$4\frac{4}{5}$	=	1		Marsal						
48	=	12	=	$2\frac{1}{2}$	=	1		Parrah				
96	=	24	=		=	2	=	1		Amuṇam		
768	=	192	=		=	16	=	8	=	1		Last
7,200	=	1,800	=	375	=	150	=	75	=	$9\frac{3}{8}$	=	1

The English bushel is equal to 34 seers, or one parrah and 10 seers.

IV.—Measures of Surface.

The extent of land is defined by the quantity of seed required to sow it. But different lands and localities possess different degrees of fertility, and consequently the terms used must necessarily be of varying size and extent. In fertile lands the seed is not sown half so thickly as in poor soil, so that the terms used to denote measurement of surface are based upon a most anomalous principle. However, they have been used from time out of memory, and continue to be employed, having for their authority at least the sanction of antiquity.

The smallest measure is a *miṭa*, *ahura*, a fistful, as much as can be held in the closed hand. A common expression to describe "a man of straw" is to say that he is not possessed of a *miṭa* of land. This is very significant when we consider that the sower sows in fistfuls.

4 miṭas = 1 atalossa, that is, a handful with the fingers slightly bent inwards
8 miṭas = 1 pata, a handful with the fingers stretched out
2 patas = 1 manáwa, or dhota, or two handfuls
2 manáwas = 1 nẹliya, séruwa, or seer

4 nẹli	=	1 kuruṇiya, or laha
4 lahas	=	1 timba
7 lahas	=	1 bushel
5 kuruṇi	=	1 bera, or parrah
2 beras	=	1 pẹla
4 pẹlas	=	1 amuṇa
6 bushels ($5\frac{3}{4}$ more correctly)	=	1 amuṇa
6 pẹlas	=	1 yel-amuṇa
12 amuṇa	=	1 yala

The amuṇa varies in different parts of the Island. In the Colombo District it is equal to about six bushels and is reckoned at $2\frac{1}{2}$ acres, but in the Central and North-Western Provinces at 2 acres.

The equivalents of these terms in English standard measurement are as follows :—

1	amuṇa's sowing extent		=	2 or $2\frac{1}{2}$ acres[9] (2 a. 2 sq. r. $37\frac{1}{2}$ sq. p. exactly)
1	pẹla's	do.	=	2 roods, or 2 r. 20 p. (2 sq. r. $29\frac{5}{8}$ sq. p.)
1	laha's	do.	=	10 perches, or $10\frac{5}{16}$ sq. p.
1	parrah's	do.	=	1 rood, or 1 r. and 10 p.
1	bushel's	do.	=	2 roods
1	peck's	do.	=	20 perches
1	quart's / seer's	do.	=	$2\frac{1}{2}$ perches

The above terms apply to high as well as low lands, the extent of the former being given in kurakkan and of the latter in paddy sowing. For instance, the extent of "Kahaṭagahamula-watta" will be given as "1 laha kurakkan-sowing extent," while that of "Raṭadelgaha-kumbura" will be given as "1 laha paddy-sowing extent."

There is, however, this difference to be borne in mind. The above measures of extent and their equivalents in English measurement apply to paddy land, whether it is paddy ordinarily sown on low land or on high land, as is the case in the Four Kóralés and in some parts of the Central Province, where *ẹl-vi* or hill paddy is sown.

But if with regard to high land the sowing extent is given in kurakkan sowing, or without mention being made as to whether it is paddy or kurakkan, the latter will be presumed (D. C. Kurunẹgala, 21,876); and in that case a laha is the equivalent of an acre, at which computation a pẹla will be equal to 30 acres, whereas their equivalent in paddy-sowing extent is 10 perches and 2 roods, respectively.

VI.—Measures of Space.

The measures of space are very unique. According to the *Bhaisajjaya Kalpa* :—

8 paramaṇu	=	1 tresareṇu [10]
8 tresareṇu	=	1 ratareṇu
8 ratareṇu	=	1 valagra, the tip of the hair of a horse's tail
8 valagra	=	1 lehendi, a nit
8 lehendi	=	1 ukuna, a louse
8 ukuno	=	1 yava ẹṭa
8 yava ẹṭa	=	1 angala

The following is another table from the same authority :—

8 yava ẹṭa	=	3 hovi ẹṭa
3 hovi ẹṭa	=	1 angala

The *Abhiddhánapadípika* has the following table :—

36 paramaṇu	=	1 anu
36 anu	=	1 tajjari
36 tajjari	=	1 ratareṇu
36 ratareṇu	=	7 likas, or one uka
7 ukas	=	1 dannamasa, a kind of grain
7 dannamasa	=	1 angala

Pridham, in the appendix to his work on Ceylon,* says that the smallest native measure was the seventh part of a *vi-ẹṭa*, a grain of paddy, seven of which were equal to one *angala*.

* Vol. II., p. 853.

According to accepted authority an *angala* is the distance from the first to the second joint of the forefinger bent.* [11]

Carpenters and some other artificers, says Davy, had measures of their own. The carpenter's *angala* was equal to the space between the second and third joint of the forefinger :—

6 angal	=	1 pradesa
7 angal	=	1 viyata, or span

The *Bhaisajjaya Kalpa* gives 12 *angal* as equal to a *viyata*, as well as, according to another measurement, 12 *angal* as the equivalent of one *pradesa*. 12 *angal* are again commonly accepted as the equivalent of an *adiya*, or foot.

The *viyata*, or span, is of three kinds :—

(1) A *vagussa*, the space covered by the thumb and the forefinger bent at the second joint pressed on a flat surface and stretched to their fullest extent.

(2) A *vigussa*, that is the space covered by the thumb and the forefinger stretched to the fullest extent.

(3) A *viyata*, the space covered by the thumb and the little finger stretched to their fullest extent.

2 viyat	=	1 ratana, riyana, or cubit

Davy says that the carpenter's cubit, or *waḍu riyanah*, was composed of twenty-four *angal* and divided into four parts.

Witnesses in cases of house-theft before the Law Courts in the Kandyan Provinces as a rule refer to the box in which the jewellery or other valuables are alleged to have been locked up as a *waḍu-riyan-peṭṭiya*, that is, a wooden box of about two cubits in length.

A *miṭi-riyana*, or short cubit, is the space covered by the forearm with the fist closed, from the joint of the elbow to the top of the second joint of the little finger :—

4 viyat	=	1 niska
2 niskas	=	1 dhanu, or bow

According to another measurement :—

2 pradesa	=	1 riyana
2 riyan	=	1 niska

* See Clough's Dictionary, edited by Carter.[12]

The *Bhaisajjaya Kalpa* gives :—

1,000 dhanu	=	1 kosa
3 kosas	=	1 gavva
4 gav	=	1 yoduna

8,000 dunu are also given as equal to a yoduna.

According to another measurement :—

500 dunu	=	1 krosa
4 krosa	=	1 yoduna

Pridham says that 9 *viyat* are equal to one *dunna*, about 9 English feet, and 500 *dunu* are equal to a *heṭekma.*

According to another authority 2 fathoms are equal to a *dunna*, and the *Abhiddhánapadípika* gives 500 *dunu*, or bows, as the equivalent of one *krosa.*

The space enclosed by the arms placed horizontally, the elbows kept by the side, is called *atpasa.* Four *riyan*, or cubits, make one *bamba.* A *bamba*, or fathom, is equal to the space between the arms extended, a man's reach (*porisha*, Sanskrit; *purusha pramanaya*, Siṇhalese), equal to the height to which he reaches when elevating both arms with fingers extended.*

Davy says that *bamba* and *baṇḍára bamba* (employed by the king to measure roads), which were occasionally used, were more precise measures of distance. The former was considered equal to the space between the arms extended, measuring from the tips of the fingers, and was about 6 feet, and the latter, about 9 feet, was the height to which a man could reach above his head with his hand. Five hundred *baṇḍára bamba* were equal to a *heṭekma.*

28 ratanas	=	1 abhatura
7 ratanas	=	1 yasti, yatali, or pole
20 yastis	=	1 isbha
20 isbhas	=	1 heṭekma

A *heṭekma* is the distance supposed to be equal to an English mile, *heṭekma* or *seṭepma*, that is, the distance which a man carrying a load can travel in one stretch, after which he wants a little rest and breathing time, *hati erima.*

* Colebrooke's *Amarakosha*, p. 160.[13]

Mr. Herbert White of the Ceylon Civil Service refers to a *pilluma* as the distance a pingo-bearer goes without putting down his load, and gives the following interesting explanation: "*Pillumak dura* is derived from *pili* "cloth" and *inuma* "let loose." There is a custom among the Siṉhalese pingo-bearers to tuck up the cloth which they wear little by little as they go, and the whole cloth is tucked up to the waist; when it gets loose and falls down to its original form, the man is obliged to resume his tucking up from the beginning over again. The distance which he is supposed to have walked by that time is equal to a *heṭekma* (mile)." This derivation appears to the editor of the *Orientalist* to be the only one that can be suggested, although it is rather far-fetched, and he adds that the word *pilluma* is not in use in the Western, North-Western, and the greater portion of the Central and Southern Provinces. It is used in some parts of the Island in the same sense as *heṭekma*, a mile, or rather a distance which a man can go without putting down his load.*

8 isbhas or 4 heṭekmas = one gavva (a measure of distance, about 4 English miles) [14]
4 gav = one yoduna [15]

and 5 *gav*, according to Pridham, made a day's journey, varying from 5 to 30 miles. Seven *gav*, equal to 28 miles, would be nearer the mark.

"It is characteristic of the people," says Sir Emerson Tennent, "that on traversing the forest they calculate their march not by the eye or by measures of distance, but by sounds."†

A common way of denoting the shortest distance from one place to another is to say that it is *anda-saddéka-dura* (*anda* "voice," *saddé* "sound," *dura* "distance"), the distance at which the sound of the voice can be heard when a person is talking,—synonymous with the English word "earshot." Natives often refer to a "loud-talking distance" (*hayiyen katá karaṇa saddé dura*) to indicate a slightly greater distance. Cf. "stone's throw."

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* *Orientalist*, vol. III., parts III. and IV., pp. 49, 50.
† *Ceylon*, vol. II., p. 582.

Tennent mentions a "dog's cry" as indicating a quarter of a mile, a "cock's crow" something more, while a *húwa* implies the space over which a man can be heard when shouting that particular monosyllable at the pitch of his voice.[16] This seems identical with the Scotch expression of "a far cry to Loch Awe." In making the shout, the "hoo" is repeated twice, the crier dwelling on the first "hoo" with a powerful *crescendo* and uttering the remaining "hoo" in a comparative *diminuendo.* These measures must for the distance they are supposed to cover certainly depend on the strength of the lungs of the crier. Pridham remarks that two "hoos" make a *heṭẹkma*, but this would depend on whose "hoo"! Tennent sums up: "As all these tests are more or less conjectural, the replies of the natives as to distances in Ceylon must always be taken with caution; for unlike the peasantry of Scotland, whose energy leads them to disregard toil and under-estimate the ground to be travelled, a Sin̥halese when asked the way to the next village generally adds to, instead of diminishing, its remoteness,"* an experience which is common with travellers in the interior of the Island who have the misfortune to rely on native guides.

VI.—Measures of Time.

Time (*kálaya*) was doubtless a matter of much importance with the Sin̥halese, if the infinitesimal divisions and sub-divisions of it afford any criterion.

The following interesting table is taken from the *Pañchán̥ga*, or Ephemiris:—

8 kshukshun	= 1 ratareṇu[17]	10 guru-aksharas	= 1 swasa
8 ratareṇu	= 1 valagra	2 swasas	= 1 kala
8 valagra	= 1 truti	3 kalas	= 1 vináḍi[20]
100 truti	= 1 lavam	10 vináḍi	= 1 kshana
30 lavam	= 1 nimisha, the twinkling of an eye[18]	6 kshanas	= 1 pẹ́ya
18 nimishas	= 1 khásṭáva	2 pẹ́yas	= 1 muhurta
1½ khásṭávas	= 1 guru-akshara, time taken to sound a long vowel[19]	3¾ muhurta	= 1 yama, or watch[21]

* *Ceylon*, vol. II., p. 583.

Clough gives *ardha-yama* as half a *yama*, or two hours. The day is divided into six watches, each containing ten hours. The first watch consists of the first ten hours of the day, and is called *davála pera-yama.* The second watch of the second ten hours, and is called *davála madyama.* The third watch of the last ten hours, and is called *paschima* or *aḷuyama.* And so the three watches of the night are designated *pera-yama rátiriya*, *madyama rátiriya*, and *paschima rátiriya.*

4 yamas, each consisting of 15 hours	= 1 dina, or day
2 dinas	= 1 ahorátiriya, one day and one night; *ahan* "day" and *rátri* "night"

Clough defines *aṭawaka* as a lunar day, 24 hours, or 60 Siṃhalese *pẹyas.*[22] A day or night is also called *tis-pẹya*, or thirty *pẹyas.*[23] *Adyatana*, according to Clough, is the period of a current day from midnight to midnight, but sometimes reckoned from sunset to sunset.

7½ ahorátiriya	= 1 sumána[24]
2 sumánas or 15 ahorátiriya	= 1 paksha

The first half of the fortnight is called *sukla paksha* or "light fortnight," and the second half *kála paksha* or "dark fortnight." Clough gives *ava* as the fortnight of the waning moon, *ava-masa* the dark fortnight, *avara-pakshaya* the moon's wane, *ardha-masa* half a lunar month, fortnight.

2 pakshas	= 1 masa, or month[25]
2 masas	= 1 irutu, or season[26]
3 irutus	= 1 ayana, half a year, *i.e.*, the sun's passage north or south
2 ayanas	= 1 warusha, or year[27]

A *kalpa* is said to be the measure of duration of the world previous to its renewal, the process of destruction and renewal being destined to go on for ever! The length of a *kalpa* is 432 millions of years! At the close, the world is to be destroyed three times in succession—by rain, by wind, and finally by fire. Phœnix-like, however, it is to rise fresh and young again from its ashes.*

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* Steele's *Kusa Játakaya*, p. 215, in notes.

The eras made use of by the Siṇhalese are:—

(1) The *Káliyuga*, which commenced 1631 years before the death of Gautama Buddha, is 2174 B.C.

(2) The era of the death of Gautama Buddha, 543 B.C., is generally used in Páli and also in Siṇhalese historical works.* The period of his becoming Buddha, viz., 588 B.C., is occasionally employed as an era.

(3) The era of the establishment of the Buddhist religion is 237 B.C., and marks the time when Mahindo renovated the Buddhist religion and brought many valuable relics of Gautama to Ceylon.

(4) The era of Saka, although seldom used in books, is generally employed in deeds and grants of land as well as every other secular document, and in calculating horoscopes. It is said to date from the time of King Saka, and is the same as that of King Sálivahana, so well known on the continent of India, whose era as fixed by the Siṇhalese corresponds to 78 A.D.† Hence 1532 would correspond, says Steele in his translation of *Kusa Játakaya*, with 1610 A.D., which is accordingly the date of the poem. Forbes gives the following legend respecting the establishment of this era :—

During a grievous famine a Buddhist priest arrived at the house of Saka, a man of the Goiya (cultivator) caste, at the time when he had only one meal of rice left to support himself and his family ; this he ordered to be prepared, and without hesitation offered it to the holy man. To reward this sacrifice to hospitality, and obedience to the injunctions of Buddha, the handful of rice became inexhaustive, and during the continuance of the famine supplied Saka, his family, and neighbours. The conduct of Saka being thus manifestly approved by the gods, the people raised him to the throne of the kingdom.‡

Siṇhalese Horology.

Robert Knox wrote in 1681, and his words hold true even at the present day, that the "Siṇhalese have no clocks, hour-glasses, or sun-dials, but the king has a kind of instru-

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* Steele's *Kusa Játakaya*, p. 230, in notes.

† This theory is exploded. See Fleet, *Corpus Inscriptisnum Indicarum.* The epoch is A.D. 77-8.—B., *Hon. Sec.*

‡ *Eleven Years in Ceylon*, vol. II., pp. 246, 247.

ment to measure time. It is a copper dish, holding about a pint, with a very small hole at the bottom. The dish they set a swimming in an earthen pot of water, which leaks in at the bottom till the dish sinks, and that makes one *pẹ́ya*, hour, or part; it is then set empty again in the water by a man who is kept on purpose to watch it."

Commenting on this passage, Mr. White, in an interesting Paper on "Siṇhalese Measures of Time," to which I owe many interesting particulars hereafter quoted, observes: "The Kandyan kings, indeed those 'black-bearded kings with wolfish eyes,' have glided away into the shadowy past, but the water clock called *pẹ́-teṭiya* in Siṇhalese, the *klepsydra* of the Greeks, may still be seen in déwálas and such places," especially in the houses of some ancient families.

The Siṇhalese, as a rule, makes nature his clock, and is a dial to himself as he walks abroad. He at least does not

> Wisely tell what hour o' the day
> The clock does strike by algebra.*

He divides his day into 60 *pẹ́yas* of about 20 minutes each, that is, 30 *pẹ́yas* of light and 30 *pẹ́yas* of darkness.

As a rule when asked the time he would say so many *pẹ́yas* after sunrise, sunturn, or nightfall, as the case may be.

Another way of measuring time is by the *piyara*, or foot, of a man's shadow, and the equivalent of the *piyara* at various times of the day and year is given in the published almanacs.

The following particulars of the *piyara* measurement are taken from the *Pañcháṇga*:—

The man who measures the *piyara* by his own foot should have six *piyaras* to the length of his shadow. If otherwise, he should measure his height with a stick, which should be divided into six parts, and one-sixth part would go to a *piyara*, and then his shadow should be measured by the *piyara* so obtained. The following table shows the reckoning of *piyara*, *angal*, *vináḍi*, and *pẹ́yas* in the morning from 10 *vináḍi* till *pahalospẹ́ya*, or 15 *pẹ́yas* (midday), and again from 10 *vináḍi* from sunturn till 10 *vináḍi* before sunset:—

* *Orientalist*, vol. III., parts 3 and 4, pp. 75, 76. [Of course from "Hudibras."—B., *Hon. Sec.*]

Before Sunturn.

Piyara.	Angal.	Pé.	Vinádi.	Piyara.	Angal.	Pé.	Vinádi.	Piyara.	Angal.	Pé.	Vinádi.	Piyara.	Angal.	Pé.	Vinádi.	Piyara.	Angal.	Pé.	Vinádi.
534	0	0	10	22	5	3	10	8	10	6	10	3	10	9	10	1	4	12	10
264	0	0	20	22	0	3	20	8	3	6	20	3	8	9	20	1	3	12	20
174	0	0	30	19	8	3	30	7	10	6	30	3	6	9	30	1	2	12	30
129	0	0	40	18	6	3	40	7	6	6	40	3	4	9	40	1	1	12	40
102	0	0	50	17	5	3	50	7	2	6	50	3	2	9	50	1	0	12	50
84	0	1	0	16	6	4	0	6	10	7	0	3	0	10	0	0	11	13	0
71	1	1	10	15	7	4	10	6	7	7	10	2	11	10	10	0	10	13	10
61	0	1	20	14	9	4	20	6	3	7	20	2	9	10	20	0	9	13	20
54	0	1	30	14	0	4	30	6	0	7	30	2	7	10	30	0	8	13	30
48	0	1	40	13	3	4	40	5	9	7	40	2	5	10	40	0	7	13	40
43	0	1	50	12	8	4	50	5	4	7	50	2	4	10	50	0	6	13	50
39	0	2	0	12	0	5	0	5	3	8	0	2	2	11	0	0	5	14	0
35	6	2	10	11	4	5	10	5	0	8	10	2	2	11	10	0	4	14	10
32	7	2	20	10	10	5	20	4	11	8	20	1	11	11	20	0	3	14	20
30	0	2	30	10	5	5	30	4	10	8	30	1	10	11	30	0	2½	14	30
27	9	2	40	9	10	5	40	4	4	8	40	1	8	11	40	0	2	14	40
25	9	2	50	9	5	5	50	4	2	8	50	1	7	11	50	0	1	14	50
24	0	3	0	9	0	6	0	4	0	9	0	1	6	12	0	0	0	15	0

After Sunturn.

Piyara.	Angal.	Pé.	Vináḍi.	Piyara.	Angal.	Pé.	Vináḍi.	Piyara.	Angal.	Pé.	Vináḍi.	Piyara.	Angal.	Pé.	Vináḍi.	Piyara.	Angal.	Pé.	Vináḍi.	Piyara.	Angal.	Pé.	Vináḍi.
0	1	15	10	1	3	17	40	3	2	20	10	6	3	22	40	12	8	25	10	32	7	27	40
0	2	15	20	1	4	17	50	3	4	20	20	6	7	22	50	13	3	25	20	35	6	27	50
0	2½	15	30	1	6	18	0	3	6	20	30	6	10	23	0	14	0	25	30	39	0	28	0
0	3	15	40	1	7	18	10	3	8	20	40	7	2	23	10	14	9	25	40	43	0	28	10
0	4	15	50	1	8	18	20	3	10	20	50	7	6	23	20	15	7	25	50	48	0	28	20
0	5	16	0	1	10	18	30	4	0	21	0	7	10	23	30	16	6	26	0	54	0	28	30
0	6	16	10	1	11	18	40	4	2	21	10	8	3	23	40	17	5	26	10	61	6	28	40
0	7	16	20	2	0	18	50	4	4	21	20	8	10	23	50	18	6	26	20	71	2	28	50
0	8	16	30	2	2	19	0	4	11	21	30	9	0	24	0	19	8	26	30	84	0	29	0
0	9	16	40	2	4	19	10	4	12	21	40	9	5	24	10	22	0	26	40	102	0	29	10
0	10	16	50	2	5	19	20	5	0	21	50	9	10	24	20	22	5	26	50	129	0	29	20
0	11	17	0	2	7	19	30	5	2	22	0	10	5	24	30	24	0	27	0	174	0	29	30
1	0	17	10	2	9	19	40	5	3	22	10	10	10	24	40	25	9	27	10	264	0	29	40
1	1	17	20	2	11	19	50	5	9	22	20	11	4	24	50	27	9	27	20	534	0	29	50
1	2	17	30	3	0	20	0	6	0	22	30	12	0	25	0	30	0	27	30	0	0	0	0

The following table shows the additions to be made to the figures given in the foregoing tables to ascertain the correct time :—

Name of Month.	The Time in the First Ten Days.		The Time in the Middle Ten Days.		The Time in the Last Ten Days.	
	Piyara.	Angal.	Piyara.	Angal.	Piyara.	Angal.
Mésa	0	8	0	11	1	7
Varsabha	1	11	2	2	2	5
Mituna	2	6	2	8	2	6
Kaṭaka	2	6	2	0	1	9
Siṇha	1	4	1	0	0	7
Kanni	1	0	1	4	2	4
Tula	2	4	2	10	3	6
Varchika	3	7	3	10	4	0
Dhanu	4	4	4	4	4	4
Makara	4	2	3	10	3	6
Kumbha	3	0	2	6	2	6
Mína	1	4	1	4	0	6

The village husbandman has a graphic way of conveying to others the time at which something or other occurred. First and foremost,—and very early it is too,—is cockcrow. Not content with the general term, he distinguishes two "cockcrows," called first and second cockcrows. The first occurs about 3 A.M., and is a mere prelude to the real or second cockcrow, which occurs about 4.30 A.M., when—

> The cock with lively din
> Scatters the rear of darkness thin.

This immediately precedes dawn (*elivenawá*, *uḍé*, or *davasdebáge*). Dawn is also called *aḷuyama*, *aliyama* meaning light, *pándara* (*pahan* "light" and *dara* "to bear") *vaitála*.

Several expressions are used to denote the advance of morn. *Vaṭin goḍin eliya veṭenawa*, "light falls on hill and dale"; *sappeyó kin bin gána veláwa*, "the time when birds fill

the air with their cries" ; *kurulló bimaṭa bahina veláwa*, "the time that the birds alight from their roost" ; *bambara meṣso gosáva veláwa*, "the time that the bambara bees hum" ; *gasvala neṭi péna veláwa*, "the time that the branches and twigs of the trees can be seen" ; *allé iri péna veláwa*, "the time at which the lines in one's palm can be seen" ; *pẹ́ teṭiya veláwa*, "the time the water-clock is set agoing" ; *aruṇa veláwa, aruṇa neguna*, "the sun has risen."

Harak dakkana veláwa, "the time when men drive cattle (to plough)," is an expression commonly used to denote one of the small hours of the morning.

The sun having risen, *pinda páta veláwa* comes next. It is between 9 A.M. and 11 A.M. Buddhist priests start from their monasteries to beg alms at about 9 A.M., and are so engaged till about 11 A.M., when they return to their residence—the interval is known as *pinda páta veláwa*, "alms gathering time."

Dan veláwa is the time when the monks partake of the meals they have begged, and is about 11 o'clock.

"Midday" is *madyana* or *pahalos-pẹ́ya*, "15 o'clock," when the "swinked" husbandman has his midday meal, and this is a point of time from which and to which he reckons in *pẹ́yas*. This hour is also called *hiṭi-piyara veláwa*, the hour when the shadow of a man is under his foot. It is also known as *ira-mudun veláwa*, the hour when the sun is right over head; *maha-madyana*, great midday ; and *avara veláwa*.

A pretty expression, *mí kelina veláwa*, "what time bees do play," is used to denote a time about four o'clock in the afternoon. This time is also known as *mal pipena veláwa*, the hour when the (*sendirikka*) flowers burst into bloom.*

The expression *husmak* is used to denote 5 or 7½ *pẹ́yas*, the time during which a man is engaged in working without intermission, but Mr. White gives this explanation : "Should any one molest a husbandman while tilling his paternal fields with the mamoty (*gaudentem patrios findere sarculo*

* *Sendirikka* is the "Marvel of Peru," commonly called "four o'clock flower."

agros) a fight may ensue. Bystanders have described such a combat to me as lasting *de-husma*, 'two breathings,' which may be idiomatically rendered 'two rounds.' This is delightfully graphic."

The time of sunset is fairly regular in Ceylon. *Ira bahi-nawá*, the sun sinks down, plainly describes the apparent phenomenon. This time is also known as *hẹndẹwa*, *hẹndẹ́ veláwa*, or *havas-waruwa*.

Harak dakkana veláwa, the time when cattle are driven home to their pinfolds, is about 5 o'clock, 2½ *pẹ́yas* before nightfall.*

Miniha pénna nepénna veláwa, when a man may or may not be recognised, is dusk, which is also known as *tharu péna veláwa*, the time when the stars are seen.

Bimaṭa karuwala vẹṭena veláwa, the time when darkness sets in ; *kurullo gas yana veláwa*, the time when birds go to roost ; *pẹ tẹṭiya veláwa*, *allé iri péna nepéna veláwa*, *gas wala nẹṭi nepéna veláwa*, the negative forms of the expressions used to denote the time at dawn.

" The time when lamps are lit," and " the evening meal " or " supper," are points of time from which the Siṇhalese reckon backwards and forwards in *pẹ́yas*.

" The time when a man wakens after his first sleep," *nindak budiyalá ẹha ẹruna*—generally two *pẹ́yas*—is rather indefinite, varying with the habits of the sleeper, but it is a common expression.†

And then we come to *pahalos-pẹ́ya*, " 15 o'clock," or " mid-night," also known as *maha rẹ́* or *maddima rẹ́*.

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* *Sotoo goman keliṇa veláva* (*Orientalist*, vol. III., p. 100).—B., *Hon. Sec.*

† Cf. " Nyanza," cried the native boy, " Nyanza ? Ay, the Nyanza lies this way" (pointing east) " and extends that way " (north-east) " a long distance "; and when asked how many " sleeps " intervened between the Babusessé, held up three fingers on his dexter hand, and answered " three." (Stanley's *In Darkest Africa*, Colonial edition, p. 176.)

NOTES.

[1] The *Vaidiyalan̥kara*, also a well-known medical authority, gives the following particulars :—One sána = 15 madẹṭa ; 60 madẹṭa = 3 kalan ; 12 kalan = a large palam or miṭa ; 48 kalan or 4 miṭa = one kuduba or pata ; 4 times above = 16 palam or pretsa or nẹlliya; 4 times above = 256 palam ; 256 palam = 2 thula ; 56 palam or 5 drona = one timba ; 4 times above = 1,024 palam or 10 thulas or 24 palam = one waha or 10 lahas.

[2] This is the seed of the *madaṭiya* (*Adenanthera pavonina*, L. Leguminosæ). The seed is used for weighing medicines as well as precious metals. The tree grows in " the warmer parts of the Island. It attains to large dimensions, and has few branches. The bark appears to be of a scaly nature with indentations all throughout. The leaves are compound (pinnate), and are of a light green colour. Like most of the leguminaceous trees, the leaves close towards sunset and return to their natural position at daybreak. The flowers are borne in clusters, and they are of a whitish colour, especially the stamens, while the calyces are green. The pods are from 3 to 4 inches long, and curved to a slight extent. Five to six seeds are found embedded in a somewhat leathery pulp. The seeds are round, convex on both sides, and of a bright red colour. When fresh they are soft, but the dry seeds are hard with a glared appearance. The seeds are sometimes roasted and eaten. The roasted seeds are sold in the market, but are considered to be heating, producing, as is popularly believed, a defect in the hearing powers of those who eat them. In India it is said that the dry seeds are worn as ornaments, made into necklets and bracelets. The tree yields a good light-grained timber used for building purposes. The leaves and bark are locally used for external application in cases of swellings and sprains, and the leaves are said to possess a peculiar property of extracting poison caused by snake-bites."—(W. A. D. S. in *The Magazine of the School of Agriculture*, vol. II., No. 4, p. 29.)

[3] Eight palams are given as equal to a *ráttala*, or pound. Dealers in medicinal ingredients, in compounding a prescription, weigh the required ingredients according to the above tables, but in selling the ingredients they adopt the avoirdupois weight.

[4] Cf. the Tamil table of weights :—

1 grain of paddy	= visam	2 kalañchu	= kaisa
2 visam	= pilavu	4 kaisa	= palam
2 pilavu	= kunti (seed of the wild licorice)	100 palam	= nirai
2 kunti	= mañjáḍi	2 nirai	= tulam
20 mañjáḍi	= kalañchu	32 tulam	= páram

(*Orientalist*, vol. III., parts 7 and 8, p. 144.)

[5] Cf. "carat," which is probably derived from the name of a bean, the fruit of a species of *Erythina*, which grows in Africa. The tree which yields this fruit is called by the natives "kuara" (sun), and both blossom and fruit are of a golden colour. The bean or fruit, when dried, is nearly

always of the same weight, and thus in very remote times it was used in Shangallas, the chief market of Africa, as a standard weight for gold. The beans were afterwards imported into India, and were used for weighing the diamond. The carat is not of the same weight in all countries, for instance :—

One carat in England and her colonies		= 205·4090	milligrams
Do.	France	= 205·5000	do.
Do.	Vienna	= 206·1300	do.
Do.	Berlin	= 205·4400	do.
Do.	Frankfort-on-Maine	= 205·7700	do.
Do.	Liepzig	= 205·0000	do.
Do.	Amsterdam	= 205·7000	do.
Do.	Lisbon	= 205·7500	do.
Do.	Leghorn	= 215·9900	do.
Do.	Florence	= 195·2000	do.
Do.	Spain	= 205·3930	do.
Do.	Borneo	= 105·0000	do.
Do.	Madras	= 207·3533	do.
72 carats make		... One Cologne oz.	
151½ carats make		... One English oz.	

The ounce weight is used for weighing small and baroque pearls, coral, peridots, and rough garnets. (Streeter's *Precious Stones and Gems*, Appendix.)

[6] The following particulars are gleaned from an interesting judgment of Berwick, D. J., in which the judicial value of a *kalañji* of gold in the currency of the Island was determined :—

A *kalañji* of gold is an expression commonly used in dowry contracts among Moormen, the term itself being a denomination of weight imported from India. The *kalañji* originally represented 72 average grains of wheat. On weighing a sample the 72 grains were ascertained to be 71·5 grains troy. Fixing the weight of a gold sovereign at 123·274 grains and its value at Rs. 10, one *kalañji* was found to be worth Rs. 5·80. A *kalañji* being equal to 71·5 grains troy, it follows that there are six seven-tenths (6·713 exactly) *kalañjis* in an ounce troy. In Winslow's Dictionary a *kalañji* is stated to be a "jeweller's weight of 12 *panavidies*, and a *panavidie* to be a small weight of gold, the ninth of a *pagoda*," consequently a *kalañji* is 1⅓ *pagoda*. According to the *Times of India* Almanac for 1872, p. 83, the *pagoda* weight is given as 52·56 grains troy. Then the value of a *pagoda* of gold in Ceylon currency, according to the above computation, would be Rs. 4·26. The difference between the result of reckoning the *kalañji* with reference to the *pagoda* weight and with reference to the weight of so many grains of wheat is only 2 per cent. There is a wonderful approximation between a grain of wheat and a grain troy, the experiment showing them to be practically identical. (D. C. Colombo, 62.515. *Vanderstraaten's Reports*, 1869–71, appendix C, pp. 36–38.)

[7] Cf. Tamil dry measure :—

5 sevidu	=	álákku	4 náli	=	kuruni
2 álákku	=	ulakku	4 kuruni	=	tuni
4 ulakku	=	náli	3 tuni	=	kulam

A náli of earth weighs 17 palam ; of sand 20 palam ; of paddy 16 palam ; of rice 10 palam ; of salt 16 palam ; of pure water 12 palam ; of ordinary water 13 palam ; of bad water 17 palam. A náli of gingelly contains 195,000 grains ; of paddy 14,400 ; of rice 39,800; of peas 14,800 ; of beans 1,800 ; of pepper 12,800.

(*Orientalist*, vol. III., parts 7 and 8, p. 145.)

[8] As showing that terms of measurement are variously estimated in different places, it might here be pointed out that one marakal (corn measure) is considered by the people of South India to contain 4 quarts, by the people of the Vanni in Ceylon 10 quarts, and by the inhabitants of the Batticaloa District 8 quarts.

[9] The term "acre" is considered to mean the extent understood as the equivalent of that expression—one foreign to the people—according to the sowing extent represented by it, "sowing extent" being the native mode of measurement universally obtaining throughout Ceylon. In some parts the sowing extent considered as the equivalent of an acre is two bushels, in most it is two and a half, and in some it is three, but, whatever it may be, it was always intended and understood that by an "acre" should be meant the extent by native measurement locally recognised as its equivalent, and in like manner of course with its fractional parts. In answer to an inquiry from the Government Agent of the North-Western Province, Kurunégala, as to whether this construction should be put on the term "acre" in the provisions for assessment of water-rate contained in the Irrigation Ordinance,as much embarrassment would otherwise be occasioned with regard to the assessment in the absence of a survey, the Colonial Secretary replied that two and a half parrahs or two bushels' sowing extent corresponded with an acre, and was always accepted as such in the Western Province in calculations affecting paddy lands, and that this standard might be adopted as a general rule for the North-Western Province. Exceptional cases no doubt would occur where, owing to the poverty of the soil or other causes, a larger quantity of seed was used for the same extent of land ; and in such cases a relaxation of the rule might be allowed at discretion, when the circumstances required it. There was no necessity for interfering with the rule hitherto in force, as it was out of the question that any general survey of all paddy lands could be undertaken at present. (*Administration Report, North-Western Province*, 1874, *appendix D.*)

[10] Cf. Tamil long measure :—

8 atoms	=	a dust seen in the sunbeam
8 dust	=	a cotton dust
8 cotton dust	=	the point of a hair
8 hair points	=	a grain of sand
8 grains of sand	=	a mustard seed
8 mustard seeds	=	a gingelly seed
8 gingelly seeds	=	a paddy grain
8 paddy grains	=	(the breadth of) a finger
12 finger breadths	=	a span
12 spans	=	a cubit or kóle
500 kóle	=	a yosannai

The width of a finger varies between 6 and 8 grains of paddy, and is equal to $\frac{3}{4}$ of an inch. In measuring temple premises a cubit is 25 fingers; palace premises 26 fingers. (*Orientalist* vol. III., parts 7 and 8, p. 145.)

[11] The following is a Tamil table :—

1 ankulam	=	$\frac{5}{6}$ of an inch
24 ankulams	=	1 cubit
4 cubits	=	2 dhanu
2 dhanus	=	1 dandam
500 dandams	=	1 kooppidu
4 kooppidus	=	1 yojana

[12] I am informed that Siṇhalese women who vend lace in the Southern Province (especially in the Mátara District) adopt a curious measurement. They measure lace from the tip to the knuckle of the middle finger, three of which evidently go to a foot.

[13] A common mode of ascertaining the height of an elephant is to measure the footprint of the animal three times, which will give the exact height. According to an Indian authority "the footprint of a male elephant is round, that of a female elliptical, and six times the diameter of these impressions give the height of the animal."

[14] One *katham* or *gavatham* (distance) is estimated by the Indian Tamils to be 10 miles.

[15] A *yojana* is estimated by the Indian historians to be about 18 miles, by the ancient Indian Government about 9½ miles, by the writers of Indian sacred books or *shastrams* 5 miles, and by the Siṇhalese 16 miles. Mr. S. Mervin, of Jaffna, in his interesting Paper on "Hindu Astronomy, as compared with European Astronomy," read before the R. A. S., C. B., says that the measurement is not exactly settled, and recommends the adoption of the estimate employed by the Indians in their sciences in preference to that used by other nations. The following interesting particulars have been culled by him in support of his statement that a *yojana*, as used in Hindu Astronomy, is approximately equivalent to five English miles, and that the term is used in different places as expressing longer or shorter distances :— யோசனை (*yogaṇai*), a measure of distance reckoned from 4 to 10 நாழிகை (*náḷikai*), usually about 13 miles. *Wilson.*, about 9 miles. In Astronomy the 5059th part of a great circle, or on the equator about 4¼ geographical miles, or nearly five English miles. (Winslow's *Tamil-English Dictionary.*) *Yogana* (San. yojana), a measure of distance varying from 4 to 10 miles, but usually about 5. (East Indians) Webster's *English Dictionary*. Hieuen Thsang, a Chinese monk, who visited India in the middle of the seventh century, reports that in India, according to ancient tradition, a *yojana* equals 40 *li* (a *li* is about 550 yards). According to the customary use of the Indian Kingdom it is 30 *li*. But the *yojana* mentioned in the sacred books contains 16 *li*, which smallest *yojana* is equal to 8,800 yards, or five English miles. Mr. Mervin lastly instances the distances in *yojanas*, as given in the ancient works on science, such as *Surya Siddhantam*, &c.,

in regard to the diameter of the earth, the moon, &c., which being multiplied by 5 nearly correspond with the distances in miles as given in the European works on Astronomy,—an indirect proof in support of his contention. According to a table given in *Kanthapuranam*, tit. *Andakosam*, a *yojana* is equal to 32,000 yards, while some authorities give it as equal to 16,000 yards, and others 8,000 yards.

[16] "Some far off halloo breaks the silent air."—Milton. Cf. the peculiar war cry of the Wangwana, which Stanley phonetically renders "Hehu-a-hehu." (*Through the Dark Continent*, p. 80.)

[17] Cf. time table of the Tamils :—

2	winks	=	a snap (of the fingers)
2	snaps	=	máttirai
2	máttirai	=	kuru
2	kuru	=	uir
6	uir	=	kshanikam
12	kshanikam	=	vináḍi
60	vináḍi	=	nálikai
$7\frac{1}{2}$	nálikai	=	watch
8	watches	=	day
30	days	=	month
12	months	=	year

(*Orientalist*, vol. III., parts 7 and 8, p. 144.)

[18] According to an extract from the *Sara Saṅgrahaya* (written about 1708 A.D.) given in the introduction to Alwis' *Sidat Saṅgaráwa*, p. 24: "the time occupied in winking the eye is called *sakshana*, a second equal to the time necessary for the utterance of a *lagu*, or short vowel; 18 seconds make a *kasti* or minute, 36 minutes make an hour, 2 hours one *mohota*, 30 mohotas make a day and night, 15 days make a *paksha*, 2 pakshas make one month, 2 months a season."

Clough defines *ahurusené* as so short a time as would occupy a snap of the fingers, and *anudrita* as half a *druta* or $\frac{1}{4}$ of a *matra*, or the time taken to articulate a short vowel.

The time occupied by the twinkling of an eye is called *mat;* the measure of this time is called *luhu*, and is equal to the sound of a short vowel. (Alwis' *Sidat Saṅgaráwa*, appendix C, p. 216.)

[19] Two *mats* are called *guru*, and are equal to the sounding of a long vowel, or of a vowel sound preceding a consonant made mute by the sign *hal*—a mute consonant *gathal* is equal to half a *mat*. (Alwis' *Sidat Saṅgaráwa*, appendix C, p. 216.) These sounds or syllabic instants are further referred to as follows :—"One instant is light, and is called a *lugu;* two instants are heavy, and are called *guru;* three instants are prolated, and are called *puluta;* and a silent letter is only half an instant. These instants are also illustrated by certain writers by the notes of birds and cries of animals—*e.g.*, the note of the *chataca* represents a *lagu*, the croaking of a raven a *guru*, the shrill prolated cry of the peacock a *puluta*, and the suppressed cry of a weasel half an instant, or less than one instant. (*Ibid.*, p. cxx.)

[20] According to the *Ganitha Garbha* used in schools: 60 *tatpara* = 1 *vinádi*, 60 *vinádi* = 1 *péya*, 60 *péya* = 1 day. A common expression used by the Kandyans, and especially by witnesses in Courts of Justice, to denote how long it took something or other to occur, is to say it occupied the time that a man takes to finish a chew of betel.

[21] Considering the fact that the water-clock was known to and used by the Sinhalese, the following explanation of the probable origin of "watches" is apposite:—"Under the reign of Phul, the royal palace of Nineveh, and each of the principal districts of the city, possessed a water-clock of the same shape and capacity. They were filled together, or as nearly as possible together, at the signal of a watchman stationed aloft on a tower to proclaim the rising of the sun, and they remained all day in the keeping of the officials, whose business it was to fill them as soon as they became empty. There was a regular staff of criers employed in connection with each of the time offices, and as often as the water-clocks were replenished they spread through the streets shouting out the fact for the benefit of the town's people. In this way a sort of rough computation of the flight of time was held. The intervals between the filling and emptying of the vessels were called "watches," and were probably of two hours or two hours and a half duration." (*All the Year Round*, April, 1869, p. 488.)

[22] Why is our hour divided into sixty minutes, each minute into sixty seconds, &c.? Simply and solely, replies Max Müller in the *Fortnightly Review*, because in Babylon there existed by the side of the decimal system of notation another system, the sexagesimal, which counted by sixties. Why that number should have been chosen is clear enough, and it speaks well for the practical sense of those ancient Babylonian merchants. There is no number which has so many divisions as sixty: it being divided without a remainder by 2, 3, 4, 5, 6, 10, 12, 15, 20, and 30.

The Babylonians divided the sun's daily journey into 24 parasangs, or 720 stadias. Each parasang or hour was subdivided into sixty minutes. A parasang is about a German mile, or a little more than 4½ English miles; and Babylonian astronomers compared the progress made by the sun during an hour at the time of the equinox to the progress made by a good walker during the same time, both accomplishing one parasang. The whole course of the sun during the twenty-four equinoctial hours was fixed at 24 parasangs, or 720 stadias, or 360 degrees.

This system was handed on to the Greeks, and Hipparchus, the great Greek philosopher, who lived about 150 B.C., introduced the Babylonian hour into Europe. Ptolemy, who wrote about 140 A.D., and whose name still lives in that Ptolemaic system of astronomy, gave still wider currency to the Babylonian way of reckoning time. It was carried along on the quiet strain of traditional knowledge through the middle ages, and strange to say it sailed down safely over the Niagara of the French Revolution. For the French, when revolutionising weights, measures, coins, and dates, and subjecting all to decimal system of reckoning, were induced by some unexplained motives to respect our clocks and watches, and allowed our dial to remain sexagesimal—that is Babylonian—each hour consisting of sixty minutes.

[23] The five single vowels අ ඉ උ එ ඔ influence (says the *Sidat Saṇgaráwa*, pp. 216, 217, in notes) the 30 *pẹyas* or hours, six of these hours being allotted to each vowel. These periods, called නාඩිකා in Sanskrit, begin with the rising of the sun, as follows :—

අ the first represents බාල	...	Infancy
ඉ the second සුකුමාර	...	Half growth
උ the third යෞවන	...	Youth
එ the fourth වෘද්ධ	...	Age
ඔ the fifth මරණ	...	Death

Of these the three first periods are propitious and the two last adverse.

[24] It is a curious coincidence (says Sir Emerson Tennent, *Ceylon*, vol. II., p. 582, in notes) that the Siṇhalese concur with the most ancient people of the East, the Chaldæans, Arabs, and Egyptians, not only in counting time by periods of seven days, but by distinguishing the days of the week by the planets whose names have been conferred on them :—

Sunday, *Iridá* ...	...	From *ira* the sun and *dá*, contraction of *davassa*, a day
Monday, *Sandudá*	...	From *Chandraya*, moon
Tuesday, *Angaharuwádá*	...	From *Angaharuwá*, the planet Mars
Wednesday, *Badádá*	...	From *Buda*, the planet Mercury
Thursday, *Brahaspatindá*	...	From *Brahaspati*, the planet Jupiter
Friday, *Sikurádá*	..	From *Sikura*, the planet Venus
Saturday, *Senasurádá*	...	From *Senasura*, the planet Saturn

Among the Tamils, too, the days of the week are named after the planets. *Ñáyiṭu* (ஞாயிறு), *Tiṅkaḷ* (திங்கள்), *Sevváy* (செவ்வாய்), *Putaṇ* (புதன்), *Viyáḷaṇ* (வியாழன்), *Veḷḷi* (வெள்ளி), and *Suṇi* (சனி). For particulars of the months and days, and the manner of reckoning the Tamil year, the curious reader is referred to the notes in the Appendix under tit. Paṇjángam, to Brito's *Yalpana Vaipava Malai.* While each of the seven days the Siṇhalese have put under the superintendence of a planet, each of the 60 hours into which they divide the day they place under that of a star. (Davy's *Ceylon*, p. 246.)

[25] The Siṇhalese have an astrological as well as a lunar month, divided into 27 days, corresponding to the number of their astrological stars or constellations, and like them called *nẹkẹt*, and each of these days, or each *nẹkẹta*, is divided and subdivided in a very complicated manner. They implicitly believe that the stars influence the affairs of mankind, and their actions in consequence are in a great measure regulated by the movements of the stars. The first object of parents on the birth of a child is to have his nativity cast and his horoscope made out, which is of more importance to him through life than any certified extract from a parish register to a European. Not the hour of celebrating a marriage can be fixed, a field sown, a journey undertaken, nor, indeed, a match be made without the aid of the astrologer, who, in more than one instance, has prevented the union of those whose circumstances were otherwise most suitable, but were unfortunately born under hostile stars. (Davy's *Ceylon*, pp. 246, 247.)

List of the Siṇhalese lunar and solar months, compiled from the *Vaidyalaṇkára*, with the corresponding names of the English months :—

Lunar Months.		Solar Months.	Corresponding English Months.
1.	Bak	Mésa	April 12 to May 12
2.	Wesak	Vrasambha	May to June
3.	Poson	Mituna	June to July
4.	Ẹsala	Kaṭaka	July to August
5.	Nikiniya	Siṇha	August to September
6.	Binara	Kanni	September to October
7.	Wak	Tula	October to November
8.	Il	Wurchi	November to December
9.	Unduwak	Dhanu	December to January
10.	Durutu	Makara	January to February
11.	Navan	Kumbha	February to March
12.	Medindina	Mína	March to April

The quarters of the moon are called as follows :—First quarter, *másé póya;* second quarter, *aṭawaka;* full moon, *pahaloswaka póya;* fourth quarter, *aṭawaka.*

Kalava is a digit, or one-sixteenth part of the moon, and 16 *kalavas* compose the disc of the moon *sandamadala.*

[26] *Firstly*, the seasons were divided into six, each division comprising two months, as follows :—

1. Wasantha, spring	1. Bak	Mésa
	2. Wesak	Vrasambha
2. Grísma, hot season, summer	3. Poson	Mituna
	4. Ẹsala	Kaṭaka
3. Warushá, rainy	5. Nikiniya	Siṇha
	6. Binara	Kanni
4. Sarath, sultry, autumn	7. Wak	Tula
	8. Il	Wurchi
5. Hémanta, misty	9. Unduwak	Dhanu
	10. Durutu	Makara
6. Sisira, cold, winter	11. Navan	Kumbha
	12. Medindina	Mína

Secondly, they are divided into three in a religious point of view, and comprise the following months :—

1. Gimhana, hot season	1. Bak	Mésa
	2. Wesak	Vrasambha
	3. Poson	Mituna
	4. Ẹsala	Kaṭaka
2. Washana, rainy season	5. Nikiniya	Siṇha
	6. Binara	Kanni
	7. Wak	Tula
	8. Il	Wurchi
3. Hemantha, misty season	9. Unduwak	Dhanu
	10. Durutu	Makara
	11. Navan	Kumbha
	12. Medindina	Mína

See Alwis' *Sidat Saṇgaráwa*, p. 39, in notes, and *Vaidyalaṇkára.*

[27] According to the Tamils the age of man is 100 years (cf. "The days of our years are threescore years and ten; and if by reason of strength they be fourscore years, yet is their strength labour and sorrow; for it is soon cut off, and we fly away."—Psalm XC., 10), of an elephant 100; cow or bull 20; male buffalo 30; camel 73. 1,728,000 years = the *kreta yugam;* 1,296,000 years = the *treta yugam;* 864,000 years = *tuwápara yugam;* 432,000 years = the *káli yugam;* the four yugams added together = 4,320,000 years = the *satur yugam;* 18 *satur yugams* = the reign of Manu; 74 Manu's reigns = the reign of an Indiran; 270 Indiran's reigns = a day of *Piramá;* 30 such days = a *piramá* month; 12 *piramá* months = a *piramá* year; a hundred such years = the age of Piramá; 360 such ages = the age of Atipirama; 10 such ages = a *kaṭpam.* In a hundred *kaṭpam* Roma Risi sheds one hair of his body; when ten crores of Roma Risi's hair fall Minasi Risi casts off one scale of his fishy body; when one crore of these scales fall it is a moment to Parathuvusa Risi; it takes 30 such moments for Mahá Satti to do up the hair of her head; when Mahá Satti has done her hair 780 crores of times, that space of time counts as a moment for the Urittiramákáli, who sits by the side of the Almighty. (*Orientalist*, vol. III., parts 7 and 8, pp. 144, 145.)

Mr. MODDER added that before reaching *pahalos-pẹya* (the Paper had occupied nearly an hour in reading, although several parts of it had been skipped over) he would relieve the audience by resuming his seat. (Laughter and applause.)

6. Sir E. NOEL WALKER, on behalf of the Members of the Society and their friends, proposed a vote of thanks to Mr. Modder for his Paper and the trouble he must have taken in preparing it. The prevailing reflection in his mind on listening to the long tables Mr. Modder had read was one of congratulation that his early education did not find place in a Siṇhalese school in Ceylon. His recollection was that they found difficulty enough with the simple tables of troy, avoirdupois, and lineal measures. (Laughter.) When he first came to Ceylon he confessed he had found difficulty—considerable difficulty—in ascertaining what the *kuruni* and *amunams* were, and he was more puzzled in pursuing his inquiries to find that in every Province the *kuruni* and *amunam* measures were different. The officer who was then his Principal Assistant, and who is now the Government Agent of the Western Province,* to whom he appealed, volunteered to collect some information on the subject, and when that gentleman left him he was engaged in a very interesting, and, he might say, very diligent inquiry, because there was a great variety of information concerning the different *kuruni* measures. He thought Mr. Modder had afforded some explanation of the difficulty when he told them that the unit of

* The Hon. A. R. Dawson, C.C.S.

measure was what could be carried in the fist, but they all knew that there were fists and fists. (Laughter.) Certainly he (Sir Edward) had gained some instruction that evening.

He thought he might also give expression to their sense of thankfulness to the Bishop for the interesting address he had delivered to them as President. (Applause.) They would all admit, he thought, that there was a good deal of truth in what the Bishop had said about the want of life in their Meetings. But at any rate they might say that there had been an exception that evening, and he hoped the Bishop's address would be an incentive and inducement to Members, who had the leisure to pursue inquiries, to give the Society the result of their researches. (Applause.)

The Hon. Abdul Rahiman seconded, and the vote was cordially passed.

Mr. Modder, in acknowledging the compliment, apologised for the heaviness and length of his Paper. He feared it was not free from blemishes. The subject was brimful of interest and importance, and he would have been glad if some of those present had discussed the Paper. He had expected his Paper to elicit criticism. The subject demanded the interest of all Ceylonese, and if he had had a little more time—he did his best in three weeks to put hastily together the notes he had made in the course of his studies—and a little more leisure, he would have prepared the Paper more carefully and with more satisfaction to himself. He then thanked Sir Edward Walker for having spoken so flatteringly of his humble efforts, and the ladies and gentlemen present for having accorded to his Paper such a favourable reception. He felt that they had weighed his Paper in the scales of partiality, with his own weights and measures. (Laughter). Might he lay the flattering unction to his soul that they had not found him wanting? (Applause.)

7. Mr. Modder proposed a vote of thanks to his Lordship the Bishop for presiding at the Meeting, and the vote having been passed with acclamation the proceedings terminated.

General Account for 1891.

Dr. The Honorary Treasurer in account with the Royal Asiatic Society (Ceylon Branch). *Cr.*

1891.	Amount. Rs.	c.	1891.	Amount. Rs.	c.
To Balance brought forward, Bank of Madras	802	54	By Purchase of Books	740	86
Members' Subscriptions ...	1,254	75	Printing Journals, &c.... ...	732	96
Government Grant	500	0	Charges account	878	55
Entrance Fees	68	25	Balance at Bank	274	46
Unexpended Balance of grant on account of excavations at Vavuniya ...	1	29			
Total ...	2,626	83	Total ...	2,626	83

E. & O. E.

Colombo, December 31, 1891.

W. H. G. DUNCAN,
Honorary Treasurer.

General Meeting.

Colombo Museum, August 9, 1892.

Present:

The Lord Bishop of Colombo, President, in the Chair.

The Hon. M. C. Abdul Rahiman, M.L.C.
Mr. C. Drieberg.
Mr. A. M. Ferguson, C.M.G.
Mr. D. W. Ferguson.
Dr. W. G. Keith.
Mr. W. P. Ranasiṇha.
Mr. F. C. Roles.
Mr. K. D. C. Seneviratna.
Dr. W. G. Vandort.
Mr. G. Wall, F.L.S., F.R.A.S., &c., Vice-President.

Mr. E. S. W. Senáthi Rája, Honorary Secretary.

Mr. Gerard A. Joseph, Assistant Secretary.

Visitors:—Five ladies and several gentlemen.

Business.

1. Read and confirmed Minutes of Meeting held on March 19, 1892.

2. Mr. George Wall, Vice-President, at the request of the President, took the Chair, temporarily.

3. His Lordship the Bishop, before commencing his Paper, made a few introductory remarks. He said that the Paper he was about to read was already known to some of the Members in substance, as copies in rough proof had been supplied to those specially interested in the subject. He wished it known that he was neither the discoverer nor author of the matter he was going to dwell on that evening, but that it was the work rather of one who had gathered and put together what had previously been scattered about in different places. The real honour of the discovery belonged to Mr. K. J. Pohath, though there might be perhaps some question as to who will have the final honour of the discovery of the site under discussion. He was sorry that when he was writing his Paper he was unaware of Mr. Pohath's account of his views, expressed in communications to the *Ceylon Independent* at the end of May and again in July of 1889,* and also in a letter to the Society in May of that year. He thought that it would have been better to have dealt with them at this Meeting. He had, however, quoted Mr. Pohath's shorter letter to the *Orientalist*.

* Mr. Pohath's letters appeared in the *Ceylon Independent* of May 15 and July 12, 1889.

His Lordship then read the following Paper :—

THE IDENTIFICATION OF THE SIRIVAḌḌHANAPURA OF "MAHÁWAṈSA," CHAPTER LXXXV.

By the Right Rev. R. S. COPLESTON, D.D., Lord Bishop of Colombo, President.

THE eighty-fifth chapter of the *Maháwaṇsa* opens with a very elaborate and gorgeous description of the city called *Sirivaḍḍhanapura*, and of the festival held by Parákrama the Second at the end of the thirteenth century, when he conveyed the tooth-relic from Dambadeṇiya to this Sirivaḍḍhanapura.

It has been for a long time the received opinion that this city was what now is Kandy, Kandy having been known as Sirivaḍḍhanapura in later times. This opinion has lately been called in question, and evidence has been collected by which it is conclusively proved, as I think, to be erroneous. The Sirivaḍḍhanapura of the thirteenth century was in the low-country, close to Dambadeṇiya, on the road between Kuruṇégala and Negombo, and its exact place and its original name was probably that of *Nanbambaraya*, now a village six miles from Dambadeṇiya.

The history of this question I now propose to sketch, assigning, as justly as I can, to each authority who has touched upon it, his share in the mistake or in its correction.

But first, that the plausibility of the mistake may be evident—for when a mistake has been found out one is apt to think too hardly of those who made it—I will read the passage from the *Maháwaṇsa*, as it stands in Mr. Wijesiṇha's translation.

And afterwards the king built the Mahá Vihára in the noble city of Sirivaḍḍhana wherein he was born—a city that could not be compared for its scenery—and endowed it with great possessions. It consisted of stately houses and open halls, of high walls and gates, and was ornamented with Bodhis, Cetiyas, groves, and image-houses. The workmanship thereof was diverse and of exceeding beauty, and it was adorned with great splendour. And in the vast space that extended

from the city of Jambuddoṇi to the city of Sirivaḍḍhana, the length and breadth whereof was about eight yojanas* and one usabha, (the highway was) made even like the face of a drum, and was covered throughout with sand, exceeding fine and soft. And the divers flags and banners which ornamented the sides thereof were so great in number that they seemed to hide the rays of the sun; and rows of plantain trees were placed along the length thereof, with divers vessels for water, of exceeding beautiful workmanship, filled with ornamental flowers. And within this vast space the chief of men caused royal arches to be raised, one at every space of five cubits, at every space of ten cubits a cloth-arch, and at every space of hundred cubits a stately house of great size, consisting of three stories and lofty spires, and containing images of the supreme Buddha,—all finished with paintings of exceeding great beauty.

Afterwards he ornamented the vihára with many painted arches round the circuit of the vihára wall, of great size and beauty,—arches that looked contemptuously on the beautiful bow of the chief of the gods;† with white parasols that looked like the moon in her fullest splendour, and beautiful flags of five colours and divers shapes, like beautiful dancers dancing in the firmament of heaven; with rows of splendid halls glittering with jewels, like beautiful rows of mansions that were come down from the world of gods; with numerous images of Brahmas dancing in rows with parasols in their hands, that were moved by instruments; with moving images of gods of divers forms that went to and fro with their joined hands raised in adoration; with moving figures of horses prancing hither and thither with the beauty of waves, rising and falling one after the other in the great sea; with moving likenesses of great elephants, clothed in the trappings of elephants, making men doubt whether they were not rain-clouds that had descended to the earth;—with these and divers other shows of this kind which delight the world, and are used at feasts, did he make the vihára exceeding attractive.

Then again the king commanded all the priests and novitiates and the lay devotees also, male and female, who were dwellers in the island of Laṇká, to wait for the procession in great crowds without the vihára and around it, at the space of a league from each other, raising shouts of applause and uttering the praises of the supreme Buddha, and holding in their hands offerings, flowers, and such like things that were needful at feasts in honour of Buddha; and (he likewise commanded) all others, men and women who knew the value of the three sacred gems, to adorn themselves in their best apparel (and to tarry for the procession) with things that were fit for offerings. And the

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* According to Childers the *yojana* is about equal to twelve miles. But see *Ábhidána padippika* v, 196.

† Indra's bow.

king also, moved by great devotion, decked himself in all the royal ornaments and, in the midst of his four-fold army, placed the two relics of the Tooth and the Alms-bowl in a carriage of great splendour, decorated with all the ornaments of an equipage. Then he caused rows of men to carry before the procession these articles and divers others that were used at feasts; namely, banners of gold and banners of silver, water-pots of gold and water-pots of silver, chowries of gold and chowries of silver, caskets of gold and caskets of silver, beautiful fans of gold and fans of silver, *pokkharaṇis** of gold and *pokkharaṇis* of silver, and flower vases made of gold and flower vases made of silver. Then the king, followed with the sound of the five instruments of music and forming a procession of great magnificence, carried the relics by stages along the decorated highway into the city of Sirivaḍḍhana, and placed them on the seat that was prepared for Buddha in the spacious ornamented hall that was built in the middle of the vihára, and caused offerings to be made thereunto by the divers people (who had assembled there).

And when the morning was come all the people arrayed themselves in their best garments, and, being exceeding desirous of gaining merit, went up with flowers of the jasmine and champac and ironwood, and other kinds of flowers of divers hues mixed with flowers of gold (leaf) and the like, and devoutly made their offerings to the Tooth-relic and the Bowl-relic. And they made offerings also of many heaps of sweet white rice that looked like heaps of glory that had long gathered around the great king, and of divers kinds of fruit, such as plantains, jak, mango, and the like fruits that were exceeding ripe, sweet, and luscious. Then the king himself, in like manner, made offerings of divers kinds to those two noble relics; and then he who was taught in all good manners ministered unto the Order and carefully provided them with food and drink,—food hard and soft, and drink that could be sucked, and drink that could be swallowed. And the lord of the land, who was exceeding delighted on that occasion, bestowed on several hundreds of priests the eight things that were needful for monks. Afterwards, throughout the three watches of the night, he illuminated the vihára all round with lacs and crores of lighted lamps fed with perfumed oil, and with garlands of divers lamps perfumed with camphor oil, so that the whole face of the land looked like the firmament that was studded with stars. And the lord of the land held a feast in honour of Buddha, to which all men were drawn by the sweet songs of singers and the dances of many dancers as they danced in divers characters on the excellent stages that were raised here and there,—a feast the tumult whereof was greatly increased by the sound of the five musical instruments which, like a blast proceeding from the sea of his merits, sufficed to drown the roar of the ocean and to put to shame

* *Pokkharaṇi* is a lotus pond. These were probably miniature representations of it.

the thunder of the clouds,—whereat also the voice of religion was heard from pulpits reverently set up by the faithful at divers places, whereon sat preachers of the sacred law, who, with beautiful fans in their hands, proclaimed the good law that convinced the hearts of the hearers thereof,—a feast which also was made pleasant by the shouts of the four classes of Buddha's disciples,* who went hither and thither viewing all things with admiration and congratulating each other as they praised the virtues of the three sacred gems, exclaiming, "Oh the Buddha ! Oh, the Dhamma ! Oh, the Saṅgha !"—whose praises also were sung in strains like those of the Nandis† by the masters of the ceremonies‡ as they stood in crowds on every side invoking the blessings of Buddha.

And for seven days the lord of the land held this great feast in honour of the three sacred objects (Buddha, the Law, and the Church) in such a manner as if he were showing here (on earth) how even the chief of the gods held the feasts of Buddha in heaven, and as if he proclaimed how the kings of the olden time, the great rulers of the Siṇhalese, held their feasts in honour of the supreme Buddha, and as if he proclaimed to all men how the perfections of the Omniscient Buddha, like unto the wish-conferring tree of heaven, yield fruit in and out of every season.

And afterwards when he (the king) haḍ made the Mahá Vihára the property in common of the brethren, he dedicated it to the great priesthood, and thus filled the measure of his merit and his fame.

No one can hear this passage without feeling how well it fits Kandy, and wondering what other city there can have been—since Anurádhapura and Poḷonnáruwa are out of the question—that can have deserved such a description. But it would not be right to put the passage in this its English dress before you without at once pointing out that there are two details—one really of essential importance, and one important in its effect on the total impression produced by the passage—in which it does not accurately represent the true original.

First, the distance, eight yoduns and one usabha,—which would make 97 miles,—represents what I may confidently call a false reading of the original, which is "*half a yodun*

* Monks, nuns, lay disciples, and female devotees.

† Speakers of prologues in a drama, or panegyrists.

‡ *Bali-bhojaka-jeṭṭha.* This is an obscure word ; but I believe it is meant here for the chiefs of servers or managers in festivals, who were entitled to enjoy the surplus or remains of food offered during the ceremonies.

and one usabha," or about seven miles. Mr. Wijesiṇha reads "*aṭṭha*," "eight," where the best manuscripts as well as the printed edition have "*aḍḍha*," "half."

Secondly, where in the first sentence he describes the city as "incomparable for its scenery"—a touch which fits Kandy, and is inapplicable to the flat country of Dambadeṇiya—the words "for its scenery" are not in the original, and have doubtless flowed from Mr. Wijesiṇha's pen under the influence of the idea that he was describing Kandy.

When the inhabitants of Kandy first began to claim this honour for their own I cannot tell; but at any rate about 1833, those who supplied Sir Alexander Johnstone with the books which were placed for editing in Mr. Upham's hands, must have told Mr. Upham that this Sirivaḍḍhana was Kandy. In that author's English of the *Rájaratnákaraya*, after the words "the king built the city called Sreewardanam Poora" the words "now called Candy" are boldly inserted in the text, without a hint that they are not in the original (Upham II., 104). Neither in the *Rájaratnákaraya* (which was probably completed in the sixteenth century and borrowed largely from the *Maháwaṇsa*) nor in the *Rájavaliya* (which was written a century or more later, and also follows the *Maháwaṇsa* closely in this part) is there anything to point to the identification with Kandy.

Turnour, a few years later, placed no confidence in Upham's work,—indeed he has too severely disparaged it,—and so Turnour escaped the mistake. He does not contradict it, nor does he attempt any other identification, but he simply says "Sirivaḍḍhanapura in the Seven Kóralés."

Sir Emerson Tennent (I., 414) was more easily misled. Referring to Upham's *Rájaratnákaraya*, but probably supported also by the popular opinion in Ceylon, he published to the world the identification of Kandy with the birthplace of Parákrama the Second. Knighton, in 1845 (p. 158), and others had already repeated the received opinion, but it was Tennent's popularity and authority, I suppose, which most widely diffused it.

The next step is a curious one. In 1877 the learned Sumaṅgala Terunnánsé and the lamented Baṭuwantudáwe Pandit published their Siṅhalese translation of the *Maháwaṅsa*, and into their text, I know not how, the error crept, which substituted "eight yoduns" for "half a yodun," though they had correctly edited the Páli text some years before.

It is to be attributed, I suppose, to this oversight, that when the learned Wijesiṅha Mudaliyár came to make his admirable English version, he adopted the text which those great scholars had adopted, and removed the city 97 miles, instead of 7, from Dambadeṇiya.

The truth seemed now in a fair way to be for ever lost sight of, at least by all who formed their opinions from published works, and not from direct study of original authorities.

But happily there were still in Ceylon students of the latter class, and among them Mr. K. J. Pohath, Mr. D. M. de Zilva Wickremasinghe, Native Assistant to the Archæological Commissioner, and Weliviṭiyé Dhammaratana Terunnánsé, the latter of whom has been kind enough to help me with his opinion.

The honour of drawing public attention to the mistake belongs to Mr. Pohath, and that of putting the truth in the clearest light to Mr. Wickremasinghe.

Mr. Pohath communicated to the *Orientalist*, vol. III., p. 218, the important note which I will now read :—

SIRIVARDANA PURA.—It may be interesting and useful to point out that Sir Emerson Tennent has made a serious mistake when he says in his History of Ceylon, vol. I., p. 414, that King Paṇḍita Parákrama Báhu (erroneously called by him "Prakrama" Báhu) III. "founded the city of Kandy, then called Sirivardana-pura." The truth is that this king never built a city called "Sirivardana-pura," much less the city of Kandy. It was to a city in Hat-kóralé (Seven Kóralés) called Sirivardana-pura, in the neighbourhood of the city of Dambadeṇiya, that Paṇḍita Parákrama Báhu III. removed the Daḷadá-relic. According to some histories of Ceylon, Kandy became the capital of the Island in 1371 A.D., and Paṇḍita Parákrama Báhu III. ascended the throne in 1266, more than a century before Kandy became the capital.

Dr. Murdoch, in his useful compilation of the History of Ceylon, published by the Christian Vernacular Education Society, has fallen

into the same error, evidently misled by the authority of Sir Emerson Tennent.

In the "Geography of Ceylon," by Messieurs Silva and Gabriel, Teachers of the Government Training School, Bentoṭa, published in 1887,—a very useful and well arranged work,—the compilers have committed the same blunder, when they say on page 70 that "Kandy was built by Paṇḍita Parákrama Báhu III. in 1280."

I discovered the mistake on reading, among other books, that valuable and rare history of Ceylon called *Narendracharitávalokana-pradípikáwa*, which was written upwards of 55 years ago by that great Páli scholar Yaṭanvala, High Priest, at the special request of His Excellency Sir Edward Barnes, Lieutenant-Governor of Ceylon

As the mistake was first made by an author of such great reputation as Sir Emerson Tennent, the others, it appears, simply followed him, never suspecting that he was wrong.

In the Siṉhalese translation of the *Mahàwaṉsa* (chap. 85) the distance from Dambadeṇiya to Sirivardhana-pura is given as eight yoduns. This is a mistake of the translators, who must have read the Páli word *aḍḍha*, "half," as *aṭṭha*, "eight." The distance then is only half a yodun, and not eight yoduns.

This escaped my notice, and does not seem to have attracted much attention in Ceylon. It was observed, however, and its decision was adopted, by Professor Rhys Davids, who appended to his translation of the "Questions of King Milinda," the 35th volume of Sacred Books of the East, the following addendum :—

Ṣrí-wardhana-pura. It should have been pointed out that this city is not (as stated by Emerson Tennent at vol. I., p. 414, of his "Ceylon") the same as the modern town of Kandy, but was in the Kurunægalla District, and (as pointed out by Mr. K. James Pohath in the "Ceylon Orientalist," vol. III., p. 218) about three and a half miles distant from the modern Damba-deniya.

It was by this note of Professor Rhys Davids that my own attention was drawn to the question. I at once consulted the late Pandit Baṭuwantudáwe, and was confirmed by him in my own *primâ facie* opinion that Mr. Pohath was wrong. The Pandit, as I have mentioned, had committed himself to the reading "eight yojanas," and believed it to be the correct one; and both he and I thought it more likely that the historian had overstated the distance to Kandy and exaggerated the decorations, than that a place so important as

Sirivaḍḍhana was described to be, should have been mentioned that once only, and then entirely lost sight of. It seemed to us also improbable that two celebrated places should have borne the same name, and yet that the historian should have not drawn attention to the distinction. I argued further, and the Pandit—looking only hastily at the matter—agreed with me, that the mention of an "ordination" (as it is called in the English) held by the same king in the Mahaveli-gaṅga showed that he was at Kandy. Both these arguments of mine were founded—as I will show presently—on mistakes.

At the same time I asked the help of Mr. William Goonetilleke, the learned Editor of the *Orientalist.* He had not looked into the question, and was still of the old opinion; but he kindly undertook to search into the matter.

The result of Mr. Goonetilleke's careful reading of the *Maháwaṅsa*, and of his inquiries about the true manuscript authority as to the "eight" or "half," was that he was convinced, and convinced me, that the place in question was not Kandy, but some spot about 7 miles from Dambadeṇiya. The true reading stated that as the distance, and this agreed much better with the statement that the whole road was sanded and decorated. It was also more probable that Parákrama should have been born near Dambadeṇiya, where his father lived, than among the mountains of the Central Province. Further, the *Maháwaṅsa*, after stating that the tooth was taken in procession to Sirivaḍḍhanapura, goes on to say that it was carried to Poḷonnáruwa from Dambadeṇiya; it had not gone far, therefore, from Dambadeṇiya: in fact, Sirivaḍḍhana was reckoned with Dambadeṇiya. Finally, as to the "ordination" in the Mahaveli-gaṅga, this took place not from Sirivaḍḍhana, but from Poḷonnáruwa; and the exact site of it was *Sahassa-tittha*, the place still well known as Dástoṭa, about six miles from Poḷonnáruwa.

Mr. Goonetilleke's arguments, founded, it will be seen, simply on a careful study of the *Maháwaṅsa* itself, convinced also the learned Sumaṅgala Terunnánsé.

This sufficed to establish as much as Mr. Pohath had asserted. But Mr. F. H. M. Corbet, who kindly interested himself in the discussion, put me in communication with Mr. D. M. de Zilva Wickremasinghe, who had long before this, not only convinced himself that the place was to be sought near Dambadeṇiya, but had succeeded, as I think, in identifying it still more exactly. The following are the proofs which he has been good enough to communicate to me.

The Sirivaḍḍhanapura which we are discussing was confessedly the birthplace of Parákrama. It is probable, therefore, that it was his father's home, and perhaps his father's birthplace, especially as his father, Vijaya Báhu III., lived for the greater part of his life in obscurity.

Now it is stated in more than one book (*Daḷadá Pújávaliya*, ජ8 ; *Vanni Rájavaliya*, 90) that Vijaya Báhu lived at Paḷábatgala, in the Seven Kóralés. This name has not been identified.

But the same *Dambadeṇi-asna* mentions *Nanbambaraya*, and says that Parákrama lived there, and that he constructed there a procession-path 2 gaws, or 8 miles, long. The *Vanni Rájavaliya* also mentions this procession-path. Nanbambaraya is still known, and is about the stated distance from Dambadeṇiya.

But Mr. Wickremasinghe has got nearer than this. He discovered some three years ago at Dambadeṇiya part of a poem called *Kalundá-paṭuná*, and in this he finds it recorded that *when Parákrama the Second was called to the kingdom he was superintending the cultivation of his fields at Nanbambaraya, where he had his palace.* This then was in all probability Parákrama's native place, the place which he delighted to honour.

It would be no wonder if he gave to this place, when it became the abode of royalty, the title—it is more an epithet than a proper name—of *Sirivaḍḍhanapura*, "the auspicious and prosperous city"; for this title was given in turn to many places, to Yahapaw, to Kurunẹgala, and in course of time to *Senkhaṇḍaséla*, or Kandy, itself.

But even here Mr. Wickremasinghe does not leave us to conjecture; for the same passage of the *Kalundá-paṭuná* says that *Nanbambaraya was adorned*, not only by the king's palace, but *by his queen, Sirivaḍḍhana Bisava*, "*Queen Sirivaḍḍhana!*"

Thus, not only is the place, with the highest degree of probability, identified, but a romantic light is thrown upon its origin, while the king's selection of it for honour, and the enthusiasm with which the historian describes it, are abundantly explained. We know not which more to admire, the faithfulness of our ancient historian or the ingenuity of his modern interpreters.

4. The President (the Lord Bishop) then referred to the following letter from Mr. HENRY PARKER, which appeared in the *Ceylon Literary Register* of July 12, 1892, vol. VI., No. 50, p. 396 :—

When an opportunity occurs, I hope to go in search of the site of the ancient city of *Siriwardhanapura*, which is well known in parts of this district to have existed in what is now a tract of dense forest on the right bank of the Deduru-oya, in the Wanni Hatpattu. I have obtained a manuscript which gives the boundaries of the lands attached to this city, so there can be no doubt regarding the matter. There are vague accounts of bricks and pillars having been seen in the forest, by hunters; but nothing more definite seems to be known, there being no inhabitants in the neighbourhood. *Siriwardhanapura* has previously been supposed to be Kandy, an error which I think Mr. Pohath first pointed out in the *Literary Register*.

5. His Lordship next read the following remarks on his Paper, contributed by Mr. H. NEVILL, M.R.A.S., F.Z.S., viz. :—

SIRIVAḌḌHANA-PURA.

I DO not think that the identification of this town can be so summarily accepted. The history of its period is full of strange contradictions, and it is possible that many books alluding to the subject were mutilated or suppressed.

As regards *aḍḍha* or *aṭṭha*, I must point out that Mr. Pohath's interesting note is not supported by any critical investigation on record.* How many MSS., and of what age,

* See first paragraph of Mr. W. P. Raṇesiṅghe's remarks, *infra*, p. 218.—B., *Hon. Sec.*

have been inspected to verify the reading? I have personally little confidence in Pandit Baṭuwantudáwe's scholarship,* but I have a very high confidence in the great learning and critical power of Srí Sumaṇgala. Until the contrary is quite proved, I am only ready to believe that the learned editors consulted in chief two different MSS., one for their Páli text, and one for the translation; that one contained *aḍḍha*, the other *aṭṭha*, and that Mr. Pohath met with *aḍḍha* in one or more copies.†

Nanbambaraya is also called Nanbambara,‡ and I have seen MSS. which might be read Tambambara.‡ But this legend of the king being called to the throne, when ploughing there, by no means applies to Parákrama II.§ A ballad in my own library‖ has legends on this subject, which state that the king so called to the throne was living as a fugitive in distress at Kalundáwa (city near Dambulla?), where he had married a *goyi* woman, from whom Bhuwanéka Báhu Tero was descended. This would indicate Vijaya Báhu ¶ of Dambadeṇiya, whose son, Bhuwanéka Báhu, founded a temple at Kurunégala. The Tero may, however, be Bhuwanéka Báhu I., who, according to one tradition, was a priest. In my ballad‖ this Nanbambara would by the context seem to be a place close to Kalundáwa; though I lay no stress on this, as ballads are very disjointed in such allusions.

Again, the *Dambadeṇi-asna* is a very uncertain work, and old copies have some variant readings. One of the best I know states as follows:—

Buddha warshayen ekwá dahas aṭa siya sú wissakwa awurudu vapmaṇgul karaṇa dinayehi Nambambara Kalikála Sangíta Sáhitya Sarvagña Pandita Parákrama Báhu nam maha rajayaeyi kiyâ oṭuna paelanda rájjaya karanna samayehi, &c.

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* The late Don Andris de Silva, better known as "Baṭuwantudáwe," won among his contemporaries a name for sound Sanskrit and Páli scholarship.—B., *Hon. Sec.*

† See reference under note * p. 215, *ante*.—B., *Hon. Sec.*

‡ Obvious copyists' errors.—B., *Hon. Sec.*

§ Kalikála Sáhitiya Sarvajña Paṇḍita Parákrama Báhu, *i. e.*, Parákrama Báhu II. (1240-1275 A.D.), according to the *Maháwaṇsa* editors, or Parákrama Báhu III. (1266-1301 A.D.) following Turnour. See, too, "Report on the Kégalla District" (Sessional Paper XIX., 1892, p. 77).—B., *Hon. Sec.*

‖ In the absence of any published Catalogue of his valuable library, the writer should certainly have specified by name the *exact authorities* he refers to for the benefit of those who may desire to consult them.—B., *Hon. Sec.*

¶ Presumably the king meant is Vijaya Báhu III., father of Parákrama Báhu II., and grandfather of Bhuvaneka Báhu I. Vijaya Báhu III.'s second son, Bhuvaneka Báhu, built a *piriveṇa* at Beligala and a *vihára* at Kurunégala (*Maháwaṇsa*, LXXXI., 59-63).—B., *Hon. Sec.*

and if this is correct, the king referred to in it was Parákrama Báhu III.,* or else all our other authorities are wrong in the date they assign to his grandfather, Parákrama II.

Again, it has the following reading :—

Tawada bohódenáṭat pin purawaṇa pinisa tamá upan Ṇanbambara siṭa Dambadeniyaṭa satara gavuvaka ṭẹn puḷulin visi riyanak ṭẹnda bheri talayak men taná kaḷu wẹli piyá sudu wẹli atuṭa waḍuwen pas riyanakata pili toraṇakda.

from which it will be seen that Nanbambara was four *gavs* off Dambadeniya. Modern copies cut this knot by omitting the date 1824 A.B. as above quoted.

Again, in foot-note on page 316 [of the English translation of the] *Maháwaṇsa*, it is stated that the *Maháwaṇsa* seems to have been expressly tampered with about this time.†

As regards the birthplace of Parákrama II. we are in one authority, No. 103 of my library and Descriptive Catalogue (MSS.), expressly told that his birthplace was Kandawuru-nuwara, the identity of which with Kandenuwara is generally admitted. The *Kurunẹgala Vistaré* (a worthless little work in the main, but holding some old traditions) speaks of his son's education by the Mahá Tera of Asgiriya at Kandy, and another little work, No. 389 of my library, mentions the king's marriage in his 22nd year (whether natal or regnal ?) to Sunétra Dévi of the Giriwaṇsa, whom I take to be the royal princess from Asgiriya, assigned by tradition as instrumental to the endowment of the Asgiriya Viháré at Kandy.

I have not leisure to unpack my Páli books and refer to my own copy of the *Maháwaṇsa*, but many copies are available at Colombo.

I may state that about twelve years ago I made some personal researches at Dambadeṇiya, and then heard the local tradition that the old palace was some miles off—I forget how many—on a piece of land sold by the Crown some years ago, and then owned by a Chetty, who had removed the few stones of interest still left from the ruins to Colombo ; but I did not visit the spot for want of time, and so forgot its name. If this is Nanbambara, it will support further the proposed identification.

Without at all questioning the identification proposed for *Sirivaḍḍhanapura*, I wish to say that at present I regard it

* Parákrama Báhu III., 1288–93 A.D. (*Maháwaṇsa* editors), 1314–19 A.D. (Turnour).—B., *Hon. Sec.*

† What is really stated in the note (‡ p. 316) is that there are, as the translator thinks, "strong grounds for suspicion" that the narrative of the reign of Parákrama Báhu III. [*grandson* of Parákrama Báhu II. of Sirivarddhanapura] has been tampered with to suppress one disgraceful incident.—B., *Hon. Sec.*

as "not proven." There is, as I said, much contradiction over the history of this period, and I have briefly pointed out some of the facts known to me, in the hope that they may assist in the discussion.

5. Mr. W. P. RANESIṄGHE read some notes on the same subject:—

I found some learned men to be decidedly of opinion that the *Sirivaḍḍhanapura* mentioned in chapter LXXXV. of the *Maháwaṃsa* is Kandy. I was therefore lead to study the question more closely. I examined several manuscripts—one of them a very old one—and the words [verse 5] in every one of them are *aḍḍha yojanúsabha* (අඩ්ඪ යොජනූසභ) "*half a yojana and one usabha*," and the Páli printed work has the same words, so that the English translation [p. 286] is not warranted by the text.

Now, the next question is, whether there is any further evidence in the *Maháwaṃsa* itself as to the situation of this city. I think there is, though not quite convincing.*

From verses 30-2 we learn that the distance translated as being "eight *yojanas* and one *isba*" (really "half a yojana and one usabha") was a street. It is there called "the decorated highway."

In verse 32 it is stated that after the procession arrived at this place the king made preparations to have offerings made. In verse 33 it is said that in the morning the people began to make offerings of flowers, &c., to the relics. Though the time is not mentioned when the procession started, it would from this seem that it was on the morning of the next day that offerings were begun to be made.

Next we find the king engaged in repairing temples at Kuruṇegala, Attanagalla, and lastly he goes to Dondra, and repairs the temple of Vishṇu there, and returns. Where? Not to Kandy, where the relics were supposed to have been, but to Dambadeṇiya. It is not likely that a king like Paṇḍita Parákrama Báhu, who was a very zealous Buddhist, would have allowed these relics to remain at Kandy, a distance, as is supposed, of 96 or 97 miles,† and remained at Dambadeṇiya.

Then we read that he built a temple at Dambadeṇiya, and placed the relics in it. There is no ceremony observed in this instance in bringing the relics back from Kandy, supposing they were there.

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* Before going into that question I have first to point out that the words in the English translation [p. 286, verses 1, 2] "and endowed *it* with great possessions. *It* consisted of stately houses and open halls," &c., refer to the *Mahá Viháré*, or Great Temple, and not to the city.

† Eight *yojanas* and one *usabha* would make the distance a little more than *one hundred and one miles.*

In chapter LXXXIX. we read that he built a palace for these relics near his own royal residence and placed them there, and then, after Polonnáruwa was cleared of the enemy, the relics were taken thither by himself and his son [Bosat] Vijaya Báhu, from Dambadeṇiya, and not from Kandy.

It is said in the chapter LXXXV. of the *Maháwaṅsa* that the king's birthplace was *Sirivaḍḍhanapura*. That the current name of this place was *Nanbambara* is quite clear from the *Dambadeṇi Asṇa*. The following are the words:—

Tavada bohódenáṭat pin puravanu piṇisa tamá upan Nanbambara siṭa Dambadeṇiyata satara gavuvak teṇ puḷulin visi riyanak teṇ da bheri taḷayak men taná kaḷu veli piya sudu veli atuṭa vaḍuven pas riyanakaṭa pili toraṇak da * * * * visituru koṭa tun masak daḷadá pujá karaṇa lesata rajahu vidhána karannáhaya.

"Moreover, in order to fill many with merits he made the space between Nanbambara, wherein he was born, and Dambadeṇiya, a distance of four gavs and in width twenty cubits, like unto the face of a drum, and removing the black sand covered it with white sand, and erecting a cloth arch at the distance of five cubits, * * * * and having thus decorated it, the king ordered offerings to be made to the tooth-relic during three months."

The words *satara gavuvak*, "four *gavs*," here seem to be a clerical error for *atara gavuvak*. Had it been the former the author would have written *yodunak*, as four *gavs* make one *yoduna*.

According to the same authority, when he was crowned in 1824 A.B.* he was surnamed *Nanbambara Kalikála Saṅgita Sáhitya Sarvajña Paṇḍita Parákrama Báhu*, where it is said—

Buddha varshayen ek dahas aṭasiya sú vissakvu awurudu vap magul karana dinayehi Nanbambara Kalikála Saṅgita Sáhitya Sarvajña Pandita Parákrama Báhu nam Maháraja yayi kiyá oṭunu peḷanda rájjaya karana samayehi.

"On the day of the shaving or sowing feast in the year of Buddha 1824, having been crowned as Nanbambara Kalikála Saṅgita Sáhitya Sarvajña Paṇḍita Parákrama Báhu Mahá Rája, and whilst he was reigning."

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* This date is evidently a mistake. It is perhaps the date of his second coronation.

[The crux how to reconcile the date as found in the *Dambadeṇi Asṇa* with those given by other authorities for the accession of Parákrama Báhu II.—which has puzzled Messrs. Nevill and Ranasiṅghe—is solved by the *Attanagaḷuwaṅsa* (chap. XI., p. 4), a work on good grounds supposed to have been composed in this reign. (See Alwis' edition, Introduction, CLXXV. ff.) It is there stated that Parákrama Báhu was inaugurated king, in the 1824th year—not from the *parinirváṇa* in 543 B.C., but from "the enlightenment" of Buddha, which works out to [1824–45 A.B. = 1779–543 =] 1236 A.D. (See "Report on the Kẹgalla District," Sessional Paper XIX., 1892, p. 77.)—B., *Hon. Sec.*]

In the *Wanni Rájavaliya* we read as follows :—

Tavada daḷadá pújáva karammeyi sitá Nanbambara siṭa Dambadeṇiyaṭa atara gavuvak digin palalin visi riyanak teṇ bhéré talayak se taná kaḷuveḷi piyá suduvellen tavará vaḍuven pas riyanakaṭa pilitoroṇak há * * * meki pujá peraharin Nanbambara siṭa mal raju un Beligal nuvarata vaḍuven pas riyanaka teṇ kanu mul udurá selgál samatalá koṭa maga depiṭa pan máligá * * * lavá tun masak mulullehi nitipatá daḷadá pujávak karavá mesé vidhána kaḷéya.

"Moreover, having determined 'I shall make the tooth-relic offering' he made the space between Nanbambara and Dambadeṇiya in length one gav and in breadth twenty cubits, like unto the face of a drum, and removing the black sand spread white sand, and on the space of five cubits erected a cloth arch * * * and having cleared a space of five cubits from Nanbambara to Beligal Nuwara, where (his) royal brother resided, of stumps and roots, and levelled down the elevated places and stones, and having erected lamp stands on either side of the road * * * he caused a Tooth-relic offering continually to be made during the space of three months, and ordered thus."

Thus it is clear (i) that *Sirivaḍḍhanapura*, where the king is said to have been born, was the same as *Nanbambara*, (ii) that the distance was only a *gava*, or about three miles from Dambadeṇiya to Nanbambara, (iii) that the offerings were made only during the space of three months, and the relics were then removed to Dambadeṇiya and thence taken to Polonnáruwa.

It is said in the *Daḷadá Pujáwaliya* that this festival was called "*Sriwardhana-pújá*." What might be inferred from this is that the name of his queen was given to the festival, and Nanbambara was called *Sirivaḍḍhanapura* after the great festival.

Kandy became the capital long after this.

6. Mr. K. J. POHATH, Mudaliyár, followed with a note embodying his views :—

THE question raised by me in 1889 was that the *Sirivaḍḍhanapura* mentioned in the chapter LXXXV. of the *Maháwaṇsa* was a buried city in the neighbourhood of Dambadeṇiya, and not Kandy, as Sir Emerson Tennent has erroneously stated in his "History of Ceylon."

The question regarding the identity of the buried city *Sirivaḍḍhanapura*, in my opinion, still remains a matter of doubt. Some think it is Randenigama Aramé, others say it is Ginigatpitiya. Mr. D. M. de Zilva Wickremasiṇghe, Mr. Ranasiṇha, and others think it is Nambambaraya. All these three places are situated in the neighbourhood of Dambadeṇiya, in the North-Western Province ; and one

* *Orientalist*, vol. III., 1887–9, p. 218 ; *Ceylon Independent*, May 15 and July 12, 1889.

of them may or may not be the *Sirivaḍḍhanapura* in question. But, in my humble opinion, there is not *at present* satisfactory evidence to support any one of these theories.

It may perhaps be useful and interesting to know that there is a city in ruins called *Sirivaḍḍhanapura*, in the Kaṭuwanna Kóralé of the North-Western Province. But I am not prepared to admit that even this buried city is the *Sirivaḍḍhanapura* referred to in chapter LXXXV. of the *Maháwaṅsa.*

The best way, in my opinion, of settling this question is for some [competent] person to visit these and other places in the neighbourhood of Dambadeṇiya to discover the buried city *Sirivaḍḍhanapura*, which was situated at a distance of only *half a yoduna*, or *two gaws*, from the ancient capital Dambadeṇiya, in the North-Western Province.

Those who have read only the Siṅhalese and the English translations of the *Maháwaṅsa*, and not the original Páli text, will no doubt be surprised to learn that the distance from Dambadeṇiya to *Sirivaḍḍhanapura* is only half a *yoduna ;* because the Siṅhalese translators and the English translator have given the distance in their translations as "eight yodunas and an isba." A *yojana*, or *yoduna*, is four *gaws*, equal to about $12\frac{2}{3}$ English miles, and eight *yodun* exceed 100 English miles.

According to the Páli text of the *Maháwaṅsa* the distance from Dambadeṇiya to *Sirivaḍḍhanapura* is half a *yoduna.* The Páli text may appear to be a little ambiguous as to whether the distance is "half a *yoduna* " or "half a *yoduna and* an *isba.*" I will quote the passage :—

ජම්බුදොණිපුරාරම්මා ආසිරිවඩ්ඪනාපුරා
දීඝවිත්ථාරතො අඩ්ඪ යොජනූසභමත්තකෙ

The distance given in the Páli text is "*half a yoduna and an isba in length and breadth.*" The writer of the *Maháwaṅsa* here speaks of the road from Dambadeṇiya to *Sirivaḍḍhanapura* made by King Paṇḍita Parákrama Báhu III. The correct rendering of the Páli text is that "*the length* (of the road) *is half a yoduna, and its breadth an isba* " which is equal to 20 *yatas*, or poles of 7 cubits each (140 cubits). This stands to reason and agrees with the Páli Text.

The distance of the road or street given by the Siṅhalese translators and the English translator of the *Maháwaṅsa* is *eight yojanas and an isba in length and breadth.* To suppose that the road was 100 miles in length and breadth is absurd in the extreme, and the more so when the *Maháwaṅsa* says that that road was made level "like the eye (face) of a drum, and was covered with sand."

7. His LORDSHIP THE BISHOP said the idea must now be abandoned that the ancient *Sirivaḍḍhanapura* is the present Kandy. As to the exact identity of *Sirivaḍḍhanapura*, that had yet to be determined, as Mr. Pohath had told them that evening. As far as they had arrived, the evidence was quite plain that *Nanbambara* was the birthplace of Paṇḍita Parákrama Báhu II., and that *Sirivaḍḍhanapura* was not Kandy.

8. The LORD BISHOP resumed the Chair.

9. Mr. G. A. JOSEPH, Assistant Secretary, read the following Paper :—

RITIGALA.*

By J. B. M. RIDOUT.

ON March 26 last, on my way down from Ritigala trigonometrical station (where I had been taking observations), I spent a couple of hours wandering over the ruins at the foot of the hill, and noted down a few particulars regarding those I saw.

Descending the path the first ruins noticeable are two double buildings alongside the path, lying one above the other, called by the villagers "*máligáwas*." They are each formed of two sixteen-pillar buildings, lying east and west of one another, and connected by a raised pavement made of a single slab of stone, from which steps descend on the southern side. They are built of square stones, which are very carefully jointed, as shown in fig. 1.

From the lower of these *máligáwas* there runs the stone causeway, five feet wide, mentioned by Mr. D. G. Mantell in his report,† which is about 260 yards long, and descends the hill to some ruins below. At about 100 yards from the top there are the remains of a doorway or porch. In two or three places, where the slope of the hill is steep, there are about half a dozen steps, with stone balustrades on each side.

* For other printed Papers on Ritigala see "A Visit to Ritigala in the North-Central Province," by A. P. Green; "Note on the Botany of Ritigala," by Dr. Trimen; "Etymological and Historical Notes on Ritigala," by D. M. de Z. Wickremasinghe, in Journal No. 39, vol. XI., 1889.—B., *Hon. Sec.*

† Appended to this Paper—B., *Hon. Sec.*

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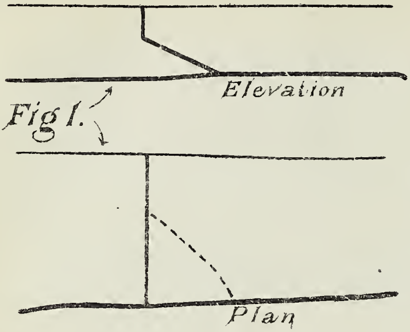

Fig 1.

Fig. 2.

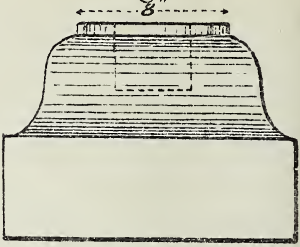

Fig. 3.

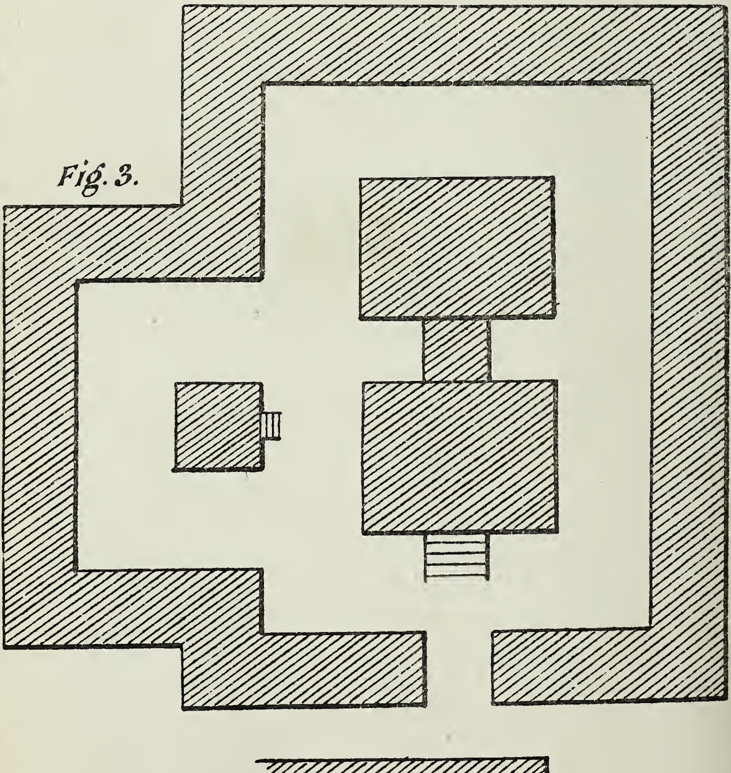

Fig. 4.

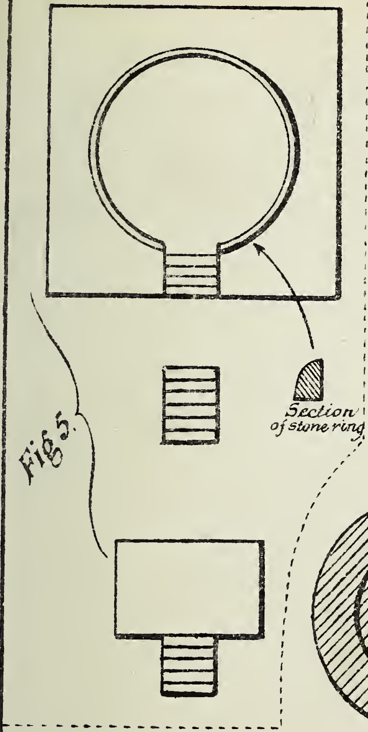

Fig. 5.

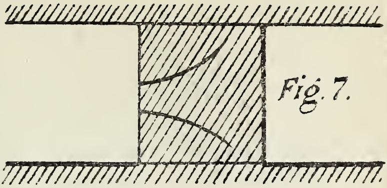
Fig. 7.

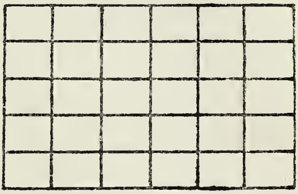
Fig. 9.

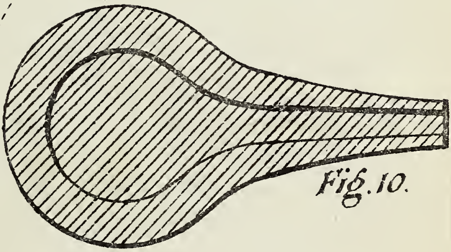
Fig. 10.

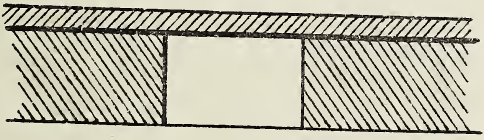
Fig. 6.

Fig. 8.

Fig. 11.

Fig. 12.

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I think that only two *máligáwas* are mentioned by Mr. Mantell, but I must have seen at least twenty—most of them facing the east, that is, towards the foot of the hill.

I started from the above-mentioned *máligáwas* in a north-westerly direction, and noticed, close to the path, that one of the hill streams had made its way through a building and washed away some of the stones. Here I found, in the bed of the stream, half covered by a slab of stone, a circular stone basin, and a moulded stone socket for a post (?), about eight inches square at the top. (See fig. 2.)

North of this place I came upon what is apparently a privy. It consists of a slab of stone with a rectangular hole, about 12 in. by 7 in., cut in it. The stone is covered with earth, and I could not get at its size. Under the stone there is a stone well, circular in shape, I think about eight feet deep and four feet in diameter.*

North-west of this place, and close to it, there is another *máligáwa*, the finest that I saw. It is built of moulded stone and is of the usual double shape ; but there is a detached building on the south of it, facing the main building, and there is an outer verandah (?) running all round the two buildings with only one opening on the east, opposite the steps of the *máligáwa*. As far as I can remember there are some buildings outside the verandah which belong to this *máligáwa*, of which the privy is probably one. (See fig. 3.)

Near this there is a ruin which looks like half a rough arch. It is about six feet high, and is built of rough stone, each course being projected further than the one below. It may be a road over one of the streams, the other half having been washed away. (See fig. 4.)

East of this there is a building which makes me think that the stones now in the Anurádhapura Kachchéri grounds, which were found below Basawakuḷam,† and which at the time were

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* All my measurements are approximate, as I had no measure with me at the time.

† Archæological Survey (Sessional Paper V., 1890, p. 2).

not unreasonably supposed to form the top of a well, are not really so. The building is a small square one, and has a stone ring in the middle of it, 10 feet in diameter, and a quarter circle in section. The circle is not complete, there being an entrance on the east, which would correspond to the piece missing in the ring in the Kachchéri grounds. From this ring steps lead down on the east, then a little further down there is another flight of steps, and then a small square building with steps leading down from it. (See fig. 5.)

I did not particularly notice any other of the buildings north of the footpath.

In the centre of the back wall of the back building in each of these *máligáwas* there is a large rectangular hole left underneath the top slab, the purpose of which I do not understand. (See fig. 6.)

In the raised stone slab connecting the two buildings in these *máligáwas* there are two curved grooves cut, apparently to carry the rain off the slab. (See fig. 7.)

South of the footpath I wandered about so much that I did not know the exact locality of any of the ruins I saw. I got on to another paved causeway, about 7 feet wide, and followed it along, seeing a good many ruins on either side of the causeway, most of them built on tops of rocks. The ground here is covered with huge boulders. I saw several *gal-gewal* (caves) but only one with an inscription; and not much of that is legible. All I could make out was what is shown in fig. 8.

The *gal-gé* had three square holes cut below the *kaṭárama* (drip line) for pillars to fit into. Another *gal-gé* that I saw, rather a large one, is formed by a large rock, which has been cut away underneath and is supported at the end by a small rock. On top of this small rock are cut an elephant, in rough outline, and several other things which I could not make out. One of them is like fig. 9.

Another *gal-gé* I saw has two figures of Buddha in it. One is a small sedent figure and the other a life-size standing one. The heads of both of them are gone. There is a brick

wall at the northern end of the *gal-gé*, and under cover of a rock close by there are a great quantity of tiles. On top of the rock forming the *gal-gé* in which the Buddhas are there is a stone building of some kind.

Near this *gal-gé*, to the south-east of it, there is a ruin with a *kessakuṭṭiya* (urinal) of the shape shown in fig. 10.

I saw a building on top of a rock by the side of a stream which flows into the *pokuṇa* (pond) mentioned by Mr. Mantell. The building is a square one, and the rock not being level at the top, the stones are fitted into grooves about an inch deep, cut into the rock, to prevent them slipping. Across the stream there is a single span stone bridge, fifteen feet high, leading from the building. The bridge is formed of three large slabs of stone, which rest on the rocks on either side of the stream. These slabs are about 14 feet long and 18 inches thick. Two are about 3 feet wide, and the other about 18 inches.

The ground all about here is covered with ruins; and there seem to be steps by hundreds leading all over the place.

It is impossible to get any idea of the place until the jungle is cleared; and even when it is cleared it will not be easy on the south of the footpath, on account of the huge boulders which cover the ground.

I do not think that I particularly noticed anything else at the foot of the hill.

I saw two *gal-gewal* on the plateau about 800 feet below the Ritigala bungalow. Neither of them have any inscription that I could discover, but on a rock in front of the bigger *gal-gé* there is a mark, as shown in fig. 11, cut into the face of the rock. There are also in this place some very rough stone boundary walls, and some rough stone stairs leading for some way up the side of the hill.

At the top of the hill, against the east side of the rock on which the trigonometrical station is built, there are two

maḷuwas (terraces) one above the other. At the north end the *maḷuwa* is about ten feet high.

About 5 chains south of the trigonometrical station I saw the remains of a brick building, but there is not enough left to make anything out of it.

I came across a moulded stone by the side of the path, about half way up the hill, from which I gather that there are some ruins near the top of the hill which have not yet been discovered.

At Galapiṭagala there is a big rock, which was apparently once a *gal-gé*, on top of a slab rock. There is an inscription on the south side, but all I could make out was what is shown in fig. 12.

MR. D. G. MANTELL'S REPORT ON RITIGALA.

Kurunėgala, August 6, 1878.

SIR,—IN accordance with your instructions I visited on the 17th ultimo the mountain called Ritigala, situated in the North-Central Province, and being provided with an aneroid and thermometer took observations with the view of inspecting as to its suitability for the establishment of a sanatarium, and I beg to report as follows, viz. :—

1. The mountain is situated in the southern portion of the North-Central Province, and the distance from the town of Anurádhapura, in a south-easterly direction, to Ulpottagama at the southern foot of the mountain, is 27 miles by a good cart road all the way.

2. The mountain, although an isolated range, consists of two hills standing north and south of each other, and separated by a deep, narrow, rocky gorge, and both are of an extremely rocky and precipitous character. The western and southern aspects of the range present an almost inaccessible appearance, but the eastern slopes of the southern hill are clothed, above and below the high projecting precipices, with heavy virgin forest, and it is on this side the ascent of the hill is always made.

3. On the higher and southern division of the mountain the trigonometrical pile stands 2,506 ft. above sea-level, and 500 ft. lower than the pile and a quarter of a mile to the east of it there is the only piece of flat land in an elevated position on the entire range suitable for building purposes, and in which there is water to be found.

4. This flat is most favourably situated as regards shelter from the south-west monsoon, which strikes the western side of the range with great fierceness. I looked down from the trigonometrical pile on this flat, and it appeared to be 15 or 20 acres in extent; but as there were heavy mists driving along at the time, I could only get at intervals partial and fleeting glances at it; besides, knowing how difficult it is to guess the extent of forest land by looking down upon it, I wish it to be understood that this estimate may be liable to considerable correction after actual survey.

5. The water found on this flat is the source of the Maha Dewille-ela, which flows in a southerly direction down the steep sides of the mountain into the Ulpottawewa, situated near the cart road at the point I have alluded to in paragraph 1 as being 27 miles distant from Anurádhapura. The water of this stream was not flowing in a continuous current on the day I visited it, but was in pools here and there in the bed. On drinking the water I found it to be good.

In 1872 Mr. James Mantell was stationed on trigonometrical duty at Ritigala from May 11 to July 10, and during that time he found abundance of water for his party from the stream. On the day of my visit all the ravines on the eastern side of the mountain were quite dry, and, with the exception of a dirty pool of water in an ancient pokuna at the base of the hill, I did not see a single drop of water till I came to this stream, 2,000 ft. above sea level.

6. The temperature on the flat I found to be 73° at 11.30 A.M., and on the same day at 3.30 P.M. at the base of the mountain the temperature was 80°.

7. Considerable difficulty will be experienced in finding a trace for a bridle path to lead from Ulpottagama to this flat. The path must be at least three miles in length, rising at a gradient of one in ten. But to trace a continuous gradient would be practically impossible, so that the path would probably have to be carried in a zig-zag course up the eastern face of the hill, and be extended probably to more than four miles in length. There can be no doubt that the precipices and enormous boulders piled in great masses beneath them will present serious obstacles to the discovery of even a very rough trace.

8. I visited the ruins alluded to in Mr. James Mantell's report, and a brief description of them may not be considered out of place in a report such as this. I found them to consist apparently of two groups of buildings: one group is perhaps 200 or 250 ft. higher as to site than the other, and connected by a well-laid causeway 5 ft. in width with a kerbstone on each side like a modern pavement. A portion of this sloping pavement is perfectly straight for ten chains or an eighth of a mile.

The lower ruins stand near to a large pokuna, which is perhaps an acre or two in extent, and must have been, when filled with water, 20 to 30 ft. deep. The breach is 30 ft. deep and 40 ft. wide. The bunds and natural sides are stepped with chiselled stones, many of which are 10 ft. in length. The foundations of the remains of one of these buildings near the pokuna measure 65 ft. by 48 ft., and stand in a spacious compound enclosed by walls of hewn stone. The upper ruins are of a higher order of architecture, and the natives call them the máligáwa. One measures 71 ft. by 39 ft., another 33 ft. by 45 ft., and a third 28 ft. square. The latter is the highest ruin, and in the best preservation. The large stones which compose it are laid with great precision, agreeing with the cardinal points of the compass, and are faced with mouldings. The forest trees have not yet displaced these massive slabs of stonework, several of which measure 16 ft. by 3 ft. by 1 ft. The distance from the lower edge of the pokuna to the highest ruin is half a mile.

9. I beg to attach a rough hill sketch to illustrate this report.*

10. I would beg, in conclusion, to suggest that at the end of a long dry season a well be dug on the flat, to ascertain the certainty of a

* Not reproduced.—B., *Hon. Sec.*

supply of fresh water being obtainable for domestic purposes at all times of the year. If this important and essential condition were satisfactorily established, the conversion of Ritigala into a sanatarium, and a garden for the cultivation of fruits and vegetables for the North-Central Province, is a mere question of cost and public policy, on which it is not my province to offer any remarks.

The Hon. the SURVEYOR-GENERAL. I am, &c.,

D. G. MANTELL.

10. The ASSISTANT SECRETARY next read the following short Paper :—

NOTES ON THE NIDIFICATION OF *CHRYSOPHLEGMA XANTHODERUS.*

By F. LEWIS.

THE nesting habits of this interesting woodpecker, as far as I am aware, have not hitherto been known ; so I take it that it will be of interest to record an instance in which I had the fortune to observe the building of a nest, ending with my getting the eggs.

I found a pair of these moderately rare woodpeckers affecting the edge of a small piece of jungle in the Pannila village in the Atakalan Kóralé, about four miles from Rakwána. They appeared to be confining their attention to a very circumscribed area, when, to my surprise, I found the fresh chips of wood from a rotten fig tree (*Ficus glomerata*) that indicated the presence of a nest.

Carefully watching this I soon found a cock and hen *Chrysophlegma* at work, and finally I secured the eggs on the morning of the 8th March. These were two in number, pure white in colour, and broad ovals in shape, measuring 1·05 in. by ·80 in. The eggs are not particularly glossy, having, on close examination, a very slightly "pitted" surface, more particularly so on the "broad" end.

The nest was hollowed out of a decomposed portion of the trunk of the tree, carried down to a depth of about 10 in. by 4½ in., the communication from the outside being a perfectly circular hole at the summit, and at right angles with the axis of the nest itself.

No lining of any sort was to be found, only a few small chips upon which the eggs rested.

The work of hollowing out the tree I was not able to observe from the start, but judging from the freshness of the wood, I think it must have been done in four days, the birds seemingly taking it in turn to work.

I may mention that the nest was only 5 ft. from the ground, with its entrance away from the direction of the prevailing winds.

I take the liberty of placing this case on record, as our knowledge of the nidification of Ceylon birds is still very incomplete.

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11. A vote of thanks to his Lordship the Bishop for presiding, and for his Paper, proposed by Mr. A. M. FERGUSON and seconded by the Hon. M. C. ABDUL RAHIMAN, concluded the Proceedings.

General Meeting.

Colombo Museum Library, October 10, 1892.

Present:

The Lord Bishop of Colombo, President, in the Chair.

Mr. W. N. S. Asserappa.
Mr. F. H. M. Corbet.
Mr. C. E. H. Corea.
Mr. F. H. de Vos.
Dr. W. G. Keith.
Dr. A. Nell.
Mr. D. C. Pedris.
Dr. Lisboa Pinto.
Hon. P. Rámanáthan, C.M.G.
Mr. W. P. Ranasinha.
Mr. F. C. Roles.
Hon. A. de A. Seneviratna.
Dr. W. G. Vandort.
Mr. A. van Starrex.

Mr. E. S. W. Senáthi Rája, Honorary Secretary.

Mr. Gerard A. Joseph, Assistant Secretary.

Visitors :—Three ladies and ten gentlemen.

Business.

1. Read and confirmed Minutes of Meeting held on August 9, 1892.

2. Dr. Vandort, by special request of the writer (who was unable to attend the Meeting), read the following Paper :—

THE ETHNOLOGY OF CEYLON.

By Mr. Advocate Louis Nell.

Preamble.

Many points in the following Paper have been lately anticipated in the discussion of collateral subjects at the meetings of this Society, and it is therefore necessary to explain that much of what I have now attempted to prove historically has been suggested to my mind by circumstances which strongly attracted my notice many years back.

When I was acting as Deputy Queen's Advocate at Jaffna during the years 1863 to 1866 I saw *ola* writings in the Malayálam language produced in the District Court in some civil cases arising from tobacco contracts. The similarity to Siṇhalese writing struck me forcibly, in the same manner that the costume of Kandyan women had before suggested a relation to the costume of Tamil or Indian women. Then followed impressions from the Tamil character of the remains

of sculpture at Dondra and the difficulty of finding Sin̥halese derivations for the names of many towns or villages on the western coast, a difficulty which is solved by adopting Drávidian derivations.

In a visit in England to Trübner's establishment at Ludgate Hill I had an opportunity of comparing the printed characters of Telugu, Canarese, and Malayálam, which all showed a greater affinity to the Sin̥halese than to the Tamil printed forms. Compare, for instance, the printed texts of Bibles in Tulu, Konkani, and Canarese.

I had also been struck by the fact that the people along the western coast and throughout the Southern Province, upon inquiry after any offender who had absconded to the Kandyan Provinces, always reported that he had run away to "Sin̥hala," or the Sin̥halese country, thus distinguishing themselves from the Sin̥halese.

There has been no complete investigation, no careful comparison, of costume, language, customs, and physical resemblances of the Sin̥halese with the Dravidian races of South India. The present Paper, therefore, does not pretend to be a complete treatise. It is strictly *a suggestive Paper*, which seems to point to the conclusion which will at no distant date be arrived at and proved by others more competent to do so than myself. At present that conclusion is not so clearly applicable to the inhabitants of the central region of Ceylon as it is to the Southern and Western coasts of the island and to the Northern and Eastern Provinces.

In the Maldives we have a race, in their physical characteristics, language, and former practice of demon worship, identical with the people of the southern coasts of Ceylon, and they may be assumed to be identical with the natives of Lan̥ká and the subjects of Rávaṇá, with a possible connection with such a race as the Shánárs.

When we come to investigate the Vijáyan period, the theory of an Aryan descent gives way for want of evidence in favour of a Drávidian origin, but this last does not shut

out a mixed descent from the large aboriginal population that Vijáya found.

How Rávaṇá obtains Ceylon.

Incidents connected with Indian mythology throw occasional light on the ethnology of Ceylon. Amongst the ten incarnations of Vishṇu, one is narrated as the *Ráma avatára.*

A giant, Rávaṇá, did severe penance till the divinity appeared to him and asked what reward he sought. Upon which Rávaṇá asked to be appointed king of Ceylon. His prayer being granted his conduct became overbearing, and he gave offence even to the gods, who complained to the highest god, receiving the comforting assurance that a king Dasaratha, having done severe penance in order to get children, the highest god had directed Vishṇu to be born to him as Rámá, who, with his brother Lakshmana, should destroy Rávaṇá.

Rámá was born, the son of Kausalya, one of the wives of Dasaratha, king of Ayóddhya (the present Oude). Rámá, after performing some of the usual wonderful feats of mythology, married the beautiful Sítá. But their happiness was not to be of long duration. Kaikéya, Dasaratha's youngest wife, desired to place her own son Bhárata on the throne, and through her intrigues Rámá was banished to the wilderness, and he was accompanied by his affectionate Sítá and his faithful brother Lakshmana.

A giantess, Máricha, contrived that Rámá should be led to pursue a deceptive deer. Thus having his opportunity, Rávaṇá takes up Sítá and carries her towards Ceylon. In the course of his flight two fabulous birds fight with Rávaṇá, who kills them. Their bodies fall to the earth. Rámá, inconsolable at his loss, meets Váli and Sugríva, monkey princes, and their general, Hanuman, who was sent forth to discover where Sítá was concealed. He discovers that she is an unwilling captive at the court of Rávaṇá, and is sent as ambassador to demand her release, and meets with a refusal.

Here intervene quarrels between the two brothers, Váli and Sugríva. Rámá sides with the younger, kills Váli, and seats Sugríva on the throne. As a consequence Rámá obtains an army of Vánaras, literally monkeys, with their general Hanuman, for his assistance.

It is quite clear from the employment of Hanuman as ambassador and then as general that these Vánaras were a race of men inhabiting parts of India near to Ceylon. Further on we shall see how other races of men have had names literally implying they were not human.

By the aid of Hanuman the Vánaras constructed a bridge from the continent of India to Ceylon, and a reef still exists, claimed as corroborating this part of the story; and Rámá, passing over with his army, slew Rávaṇá, after a hard struggle, rescued Sítá, placed Vibhíshana on the throne of Laṇ̥ká, and returned with Sítá to Oude, where he was received as king.

This Vibhíshana was Rávaṇá's brother, who had aided Rámá. No foreign settlement was therefore made in Ceylon by Rámá or Hanuman or their followers, and the native inhabitants continued the same. The only description we have of their late king is a mythological one, that is, that he was a giant with ten heads and one hundred arms, having significance to his military power. It is clearly implied that Ceylon was inhabited, and that a strong force was required to invade the Island and oppose the forces of the king of Ceylon.

It is highly probable that these original inhabitants, thus subdued by the Brahman Rámá, are the same that were afterwards subdued by Vijáya and his followers.

According to an account of "The Tinnevelly Shánárs," by Dr. Caldwell, the grammarian of the Dravidian languages, there are *Íḷavers* and *Tiers* (*i.e.*, "Siṇ̥halese" and "Islanders"), who cultivate the cocoanut palm in Travancore, and who are the undoubted descendants of Shánár colonists from Ceylon.

> It is traditionally reported that the Shánárs who inhabit Tinnevelly came from the neighbourhood of Jaffna in Ceylon ; that one portion of them—the class now called "Nadans" (lords of the soil)—entered Tinnevelly by way of Ramnad, bringing with them seed nuts of the Jaffna palmyrah, the best in the East, and appropriating or obtaining from the ancient Pandyah princes (as the most suitable region for the cultivation of the palmyrah) the sandy waste lands of Mánad, in the south-east of Tinnevelly, over which to the present they claim rights of seigniorage ; and that the other portion of the immigrants, esteemed a lower division of the caste, came by sea to the south of Travancore, where vast numbers of them are still to be found (1850) ; and from whence, having but little land of their own, they have gradually spread themselves over Tinnevelly, on the invitation of the Nadans and other proprietors of land, and who, without the help of their poor neighbours as climbers, could derive but little profit from their immense forests of palmyrahs. Some of these immigrations have probably taken place since the Christian era.

After referring to a tradition of the Syrian Christians of Travancore, that the *Íḷavers*, or "Sin̥halese," were brought over from Ceylon by *their* ancestors, Dr. Caldwell endeavours to guard against the conclusion that the Shánárs were "Sin̥halese" in the sense of that term which is distinguished from Tamil.

> The traditions of the Buddhistical Sin̥halese seems to connect them nationally as well as religiously with Behar, and consequently with the Brahmanical tribes. The Shánárs, on the contrary, though probably immigrants from Ceylon, are Hindus, not of the Brahmanical but of the Tamil or aboriginal race ; the descendants of the northern coasts of Ceylon being themselves Tamulians, the descendants either of early Tamil colonists or of the marauding Chólas, who are said repeatedly to have made irruptions into Ceylon both before and after the Christian era.

It is not safe at present to assume, what indeed only suggested itself to Dr. Caldwell, that Behár has been clearly identified as a source of the ethnology of all that is comprehended under the distinctive term "Sin̥halese." And the fact that the *Maháwan̥sa* gives an account of the conversions of the resident Sin̥halese to Buddhism corrects the idea that any Buddhist tribe from Behar emigrated to Ceylon.

That the marauding Chólas left descendants is a fair inference. The old division of the Tamils in ancient times was into Cheras, Chólas, and Pánḍiyas, according to Tamil legends, who first lived and ruled in common at Kolkei, near the mouth of the Támbraparni.

This is from "The History of Tinnevelly," in which Dr. Caldwell puts in a claim for this Tamil locality to

be the ancient Taprobane. McCrindle, the latest translator and editor of the *Periplus Maris Erythrei*, claims *Taprobane* as the Greek transliteration of the Tamil Támbraparni, and supposes that a band of colonists from Magadha gave the name to the place where first they landed, which afterwards extended to the whole island. The *Maháwan̥sa* (chap. VI.) claims that Vijáya landed in the division *Tambapanni* of Lan̥ká.

From the central city of Kolkei the three branches of the race separated. Three royal brothers parted with their followers. Páṇḍiya remained at home, and Cheran seeking his fortunes towards the north, Chólan went to the west.* In 1064 A.D. Rájendra Chóla became the first Chóla who gained the sovereignty over the Páṇḍiyan kingdom.

Chóla (in Sin̥halese *Sóli-raṭa*) is now represented by the south-east portion of the Tanjore Collectorate lying between the Tondiman Rájá's territory and the Ramnad Zemindary; that is, these limits represent at least part of the ancient Chóla kingdom. This locality yields a vast salt revenue to the Madras Government and hunting grounds for sportsmen. The land being also overspread with swamps, the inhabitants had strong incentives to make military excursions. Thus the Chólians defeated Mahálána Kitti, king of the Ruhuṇa division, seized the crown and all the treasure, and sent them to the king of Chóla. When a king of Ruhuṇa, Jugutipála, said to be sprung from the race of Rámá, came from Ayoddhya (Oude) and won the sovereignty, he was also slain in battle by the Chólians, who sent his wife, daughter, and treasure to their own country. After this Parákrama, a son of the king of Páṇḍu, reigned a little while, but the Chólians made war against him and slew him also. The Chólians were at last overcome by Makkhakudrúsa, who fixed his residence at Kataragama.

It is impossible to consider the sovereignty of a king of Páṇḍu, who came from a part of India quite as distant as the

* See Note A.

territory of the Chólians, without concluding that there were Tamil settlements, however small, in the Ruhuṇa territory, irrespective of Chólian invasions, for strong men from the Chóla and Páṇḍu countries are also said to have been enlisted in the last battle in which the chieftain Chandabhánu, who had enlisted Malays to fight on his side, was defeated by Vijáya Báhu.

There can, therefore, be no doubt that other races had some sort of settlement in Ceylon distinctively from what may have come to be considered as Siṇhalese. In addition to the fact that Makkhakudrúsa, when he had overcome the Chólians, had fixed his abode at Kataragama, we can connect the anciently remote fact that the Shánárs claim for one of their race Máhodana, the prime minister of Rávaṇá. Dr. Caldwell writes that in a village in his neighbourhood, in Tinnevelly, the Shánárs have converted Rámá, the hero-god of the Hindús, into a demon! And note the annual Kataragama pilgrimages now put under police control in consequence of the epidemics that used to break out. Whatever the prevention, the Nattucotta Chetties and others of the tribe of Shánárs strive to do honour to the pilgrims on their way to the distant hills of Rávaṇá. Along all the coast territory, particularly that which falls within the limits of the ancient kingdom of Ruhuṇa, there are customs common to the Shánárs and those who are now distinctive Siṇhalese.

Dr. Caldwell and all other writers who have practically studied the subject have pointed out that the term "Hindúism," like the geographical term India, is a European generalisation. Perhaps the most striking illustration of this is to classify the religious belief and practices of the Shánárs as a part of the Hindú religion, to which they are entirely foreign. Demon-worship and devil-dancing are not known to Hindú races or their religion. In his Paper (published as part of a periodical by the Society for Promoting Christian Knowledge, 1850) Dr. Caldwell emphasises the fact that in describing the *positive* portion of the religion of the Shánárs as devil-worship, the word "devil" is not only

an appropriate, the most appropriate, but the one exactly corresponding with the term used by the Shánárs themselves. The demons worshipped "are considered to be of unmixed malignity—*bonâ fide* fiends; and it is supposed to be necessary to worship them, simply and solely because they are malignant." Now, it is a startling fact that such a system exists only amongst the Shánárs and the low-country Siṃhalese, chiefly in the territories of the ancient Ruhuṇa. Neither has the introduction of Brahmanism in the one case or of Buddhism in the other succeeded in shaking the ancient foundations of the faith in demon-worship.

It is a popular faith, and I have known a Buddhist gentleman, a Mudaliyár, excuse the practice in Ceylon, on the ground that cures of sick persons are effected by the impressions made on their imagination by the hideous masks, the contortions of the dancers, and their howls and shrieks, accompanied with the noise of tom-toms all through the weary nights. Animals are also sacrificed to demons amongst the Siṃhalese and the Shánárs. The head is separated from the body, and the blood-offering poured upon the place prepared with decorations of palm leaves and a few flowers.

> The origin of the Shánár and Siṃhalese demonolatry lies in the unknown depths of antiquity, an antiquity equal to that of the worship of the elements or the heavenly bodies—

and the remark applies to the demonolatry of Ceylon.

All throughout these investigations the great fact must be kept in mind that the Brahmans did not *conquer* South India as they did Northern India, but came in peaceably, introducing a higher civilisation, with caste rules and a pantheistic philosophy. If we find these caste rules, so opposed to Buddhist philosophy, in Ceylon, we must remember that they have come second hand, unless a direct invasion or settlement of Brahmans can be proved. There is no such evidence, though a Brahman pretender may be traced, who for a time seized some petty sovereignty, for instance in Ruhuṇa. There were petty princes of Tamil territory, old settlers distinguishable from invading Tamils. It is not

till the time of Parákrama Báhu II. that the *Maháwansa* mentions the princes of the Vanni who submitted to him. The people of the Vanni were Tamils and Hindús in religion.

It is curious to observe that whatever the religion of the subjects might be, the royal family always kept up its distinct origin. The parents of Parákrama Báhu I. kept their household Brahmans. (*Maháwansa*, chap. LXII.) When he was of an age fit for his investiture with the thread, the king (his father) made offerings for three days, and concluded the ceremony with the help of Brahmans who were versed in the social laws contained in the Vedas. (*Maháwansa*, chap. LXIV.) The Prince Víra Báhu, nephew of Parákrama Báhu II., when he had defeated a band of Malay invaders, went to Dondra "and worshipped the lily-coloured god there, and made divers offerings unto him," that is to Vishṇu. (*Maháwansa*, chap. LXXXIII.) It is probable that the patronage of the royal family being a consideration with the compilers of these histories, which otherwise exhibit such a desire to exalt Buddhism, they were induced not to omit these little circumstances which prove the private court religion of the Sinhalese kings. If necessary, the ruins of the Vishṇuvite temple at Dondra and the Portuguese account of its destruction by them, and of its splendour, show that Brahmanism was not a poor and unendowed religion in the most glorious times of Buddhism.

I saw, in 1892, on visiting the sacred Bó-tree at Anurádhapura, that even the colossal figure of Buddha was by the sculptor invested with the sacred thread from the left shoulder across the chest and passing under the right breast. This thread had, owing to the material operated on being the common gneiss of the country, to be most carefully cut. The sculptor claimed to retain the thread with which Buddha was invested when he, like king Parákrama Báhu, came to the proper age, and no objection appears to have been raised. Of course the sculptor was of the religion of the Brahmans.*

* What Mr. Nell took for "the sacred thread" is merely the upper edge of the robe shallowly carved on the image.—B., *Hon. Sec.*

How Vijáya drifts to Ceylon.

Vijáya is numbered as the first of Siṅhalese kings, and his history, if not entirely a myth, is so mixed with what is not history and what is impossible, that to give it an aspect of clearness and certainty we must apply to it that uncompromising criticism which Niebuhr brought to the investigation of early Roman traditions.

That the composition of the *Maháwaṅsa* was commenced and continued in the order in which it stands now will not be claimed by any one. We may assume that at, or about, the period at which this historical book was first commenced the idea was conceived of completing the history by going back to the reign of the original king.

The history of every nation goes back to a cloud land of myth. Romulus and Remus were nursed by a she-wolf ; the Princess Suppadevi cohabited with a lion. The imagination of simple races in primitive times is gratified with such traditions, and they are adopted by the early historians as lending interest to their narratives.

We have outgrown these literary developments, and at once reject what we know by science and our conscience to be untrue. As we admit the existence of Romulus we may admit the existence of Vijáya. It may be here incidentally mentioned that his parents were said to have been born to a lion and the Princess Suppadevi, who seems clearly to have been a Telugu princess.

In the first part of the Paper we have tried to prove that at Vijáya's landing in Ceylon there existed an aboriginal population. There had been previous wars and invasions from India. We have observed the reverence for Rávaṇá which is still preserved amongst a race of Tamils in Tinnevelly, and which they have since signified by annual pilgrimages to Kataragama ; the demon-worship these Tamils still keep up in common with the Siṅhalese of the Southern Province and the western coast of Ceylon, with the practice of devil-dancing common to both ; the existence amongst the Tamils to this day of *Íḷavers*, or colonists from Ceylon, proving the existence

of a population which had nothing in common with Hindús, or Brahmanism, and who probably derived their name of *Yakkó* from their practice of demonolatry and pretensions to demoniacal power. There are indications also in the Vijáyan period of the existence of a race of Nágas, besides an outcast race called Chandalas.* If we accept the story of the landing of Vijáya, we cannot reject the surrounding circumstances in the same narrative, where those surrounding circumstances are not tainted with improbability.

The *Maháwaṇsa* informs us that the king of Káliṇga had a daughter who became the queen of the king of Vanga; that this king and queen had a daughter called Suppadevi, for whom fortune-tellers predicted that she would consort with a lion. The narrative proceeds to the fulfilment of the prediction, with the consequent birth of a prince and princess. This of course must be at once rejected as unnatural and false, and relegated to the limbo of the Roman she-wolf and similar traditions of North American Indians and other savage races of mankind. In a manner very similar to the Roman myth, Suppadevi's two children came to be identified by her maternal uncle, and the throne of the country is ultimately offered to the son of the lion. But Sihabahu, rejecting this, returns with Sihasivali to the wilderness of Lala, where he was born, founds a city, begets children, the eldest of whom, Vijáya, he instals when of age as sub-king.

It is through Vijáya's father, Sihabahu, therefore, that the title of the Siṇhalese nation is claimed, and this point is not worth contesting in rejecting the false story of the parentage in a wild beast. The lion who attacked the caravan which Suppadevi had clandestinely joined was probably a robber, so named for his daring in attacking travellers passing through the wilderness. To believe even this is a compromise. One thing is certain, that there never

* See Note B.

existed lions in any part of Asia where believers in this myth would like to locate the occurrence. The lion in the sculptures in Ceylon, like the grotesque figures of lions made by the Chinese, must be taken to have existed in art, and not in the natural history of the country.

The narrative proceeds to assert that though Sihabahu was unanimously elected king by the people, he himself conferred the sovereignty on his step-father, and taking Sihasivali with him, returned to the land of his nativity, where he founded the city of Sihapura, the capital of the land of Lála, in which he formed villages for irrigation in suitable localities. Sihasivali on sixteen occasions gave birth to twin children, of whom the eldest was Vijáya.

Such wonderful incidents are calculated to make us doubt whether the land of Lála and the city of Sihapura were not fanciful creations, intended to give a greater interest to the proposed pedigree of kings invented by the writer compiling this first part of the *Maháwaṇsa* narrative, about 700 years after the pretended events. Ideas from Buddhistical legends compiled in the north of India may have been used for embellishment.

The misconduct of Vijáya as a prince in the land of Lála is then related, and he comes to be banished in consequence. Another improbable arrangement is adopted. Vijáya and seven hundred men are put into one boat, their wives in a separate vessel, and their children in a third. They drift in different directions and land in different countries. Nágadípa (conjectured by L. C. Wijesiṇha Mudaliyár, in his English translation of the *Maháwaṇsa*, to be some island to the north of Ceylon) receives the children; the wives settle in Mahinda (a country which I believe is not yet identified), and Vijáya, after first landing in some part of India, re-embarks and lands in the division Tambapanni of this land Laṇká, that is, he and seven hundred companions.

He finds the country populated, and receives information from Vishṇu in the form of a devotee. This bit of supernatural machinery throws considerable suspicion on the genuineness

of the narrative. Afterwards Kuvéni is seen, who conceives a passion for Vijáya, and treacherously helps him to destroy the inhabitants of two districts who had met to celebrate the wedding of the son and daughter of their chiefs. Vijáya and his followers then assume the costumes of the leading men they had slain. Vijáya then lives with Kuvéni and has two children by her, clearly showing that she was a human being. His followers afterwards desire that he should formally assume the sovereignty, and a queen-consort of suitable rank being required an embassy to Madura in India is devised, the result of which is that not only a consort for Vijáya, but wives of suitable rank for his seven hundred followers emigrate, the nobility being encouraged to give their daughters by the king's estimation of "renowned Sihala." The princess received as dowry, elephants, horses, chariots, and slaves. Eighteen officers of state, seventy-five menial servants (horsekeepers, elephant keepers, and charioteers), all these persons embarked in one vessel at Mahathitha. The king Vijáya sent his father-in-law gifts of chanks and pearls to the value of two lakhs, showing that he already had subjects engaged in diving for these. He appears to have paid an annual tribute of chanks and pearls to the value of two lakhs. (*Maháwaṇsa*, chap. VII.)

What is the conclusion we must draw from the marriage of Vijáya and his seven hundred followers with the ladies from Madura, but that their descendants were semi-Tamil? And the officers of state, the servants, and artisans, who are mentioned as emigrating to Ceylon from Madura, are likely to have come with their families, thus leaving purely Tamil descendants. The place where Vijáya had been sent adrift with seven hundred followers must have been on the sea-coast, and at a not very great distance from Ceylon.

And even if we do not assign to Vijáya and his followers a Dravidian birth (which is probable, from his getting the daughter of the Páṇḍava of Madura), he and his fellow-settlers must certainly be held to have left Tamil

descendants. To avoid this conclusion we must either reject the whole story as a myth, or assume that the Páṇḍava was not a Dravidian—an impossible assumption, because we shall have first to sweep away all the traditions, inscriptions, and chronicles of the Tamil race, as well as the subsequent account of the existence of Tamil settlement in Ceylon given in the *Maháwaṅsa* itself.

If we deny Tamil emigration, we are left to adopt the conclusion that Vijáya and his seven hundred followers, by their intermarriage with the consorts from Madura at a period about 543 to 550 B.C., established the whole population of the present day, and gave not only to their direct descendants, but also to the descendants of the Yakkhas, the Nágas, and the Tamil colonies, the common name of Siṅhalese.

We do not find of the Danes and Norwegians, though they were so firmly established in England, and gave kings to England, that they were able to take away the name of the people already constituting the chief population. In Scotland the Norwegians and Danes were long established on the east coast, and king Alexander III. of Scotland had to defeat Hacon IV., king of Norway, in a great battle to drive them away.

The settlement of Vijáya cannot be compared to these powerful invasions and possession of a foreign country.

The popularly accepted derivation of the name *Sihalese* or *Siṅhalese* is due to the descendants of Vijáya strictly, and may be extended to those of his seven hundred followers also. If we go further, and suppose that in the course of time the term was transferred to the thousands of other races who populated the country, it will not follow, in an ethnological inquiry, that the race so called can put forward their adopted name as a proof of their descent. And we cannot ignore the people of Laṅká, who have continued in possession from before the time of Vijáya, during his reign and after, even to the present day. Even in the reign of Vijáya, after he had put

away Kuvéni, she is described as wandering with her two children to Laṇkápura, the capital of Laṇká, and a Yakkha city (*Maháwaṇsa*, chap. VII.). This is a very significant fact.

Within 106 years after Vijáya Paṇḍukábaya was installed. As part of his policy, he is described in chapter X. of the *Maháwaṇsa* as seating himself, on days of public festivity, on a throne of equal eminence with the Yakkha chief, Citta, whilst joyous theatrical spectacles were exhibited to the people. In constituting his capital at Anurádhapura, he is said to have established the Yakkha Kálavéla in the eastern quarter of the city, and the chief of the Yakkhas, Citta, he established on the lower side of the Abhaya tank. He thus formed four suburbs, and the Yakkhas would thus have formed about half of the population, as Kálavéla and Citta would not have resided in the respective suburbs assigned to them without servants and retainers. This king established a hall for the worshippers of Brahma, and another for those of Siva, and other *foreign* religious residents were provided for.

From subsequent historical narratives it would seem as if the worship of Vishṇu was carried on even after the introduction of Buddhism and together with it.

About 136 years after Vijáya, when Dévánampiyatissa sent an embassy to India of four persons, one of them was a Brahman, and the presents included the three kinds of gems, three royal palanquin poles or right-hand chanks, and eight descriptions of pearls. We must infer that there were divers for chanks and pearls settled on the coast, and that Brahmans held influential positions.

The king Dhammáṣóka, or *Aṣóka*, is said to have confirmed the sovereignty of Dévánampiyatissa over all Laṇká, and his subjects are described as a second time solemnising an inauguration of his reign. This prince is described as beloved by the people of Laṇká. We can infer that all the inhabitants of aboriginal descent submitted to his sovereignty. It is only in the next chapter (XII.) that the *Maháwaṇsa* describes the Buddhist mission to Ceylon.

We thus see that, subject to the Tamil invasions and settlements which are recorded in future chapters of Sin̥halese, the bulk of the people consisted of the original Yakkhas.

In the *Sequel to the Periplus*, which is to be found in Dr. Vincent's "Commerce of the Ancients," the northern part of the Island is described as "civilised." The inference is that by repute amongst the Greek navigators the rest of the Island was not civilised, and there can be no doubt that Vijáya and his followers met in the Yakkhas a more or less barbarous race.

The north of the Island appears to have been colonised by Tamils from an early period, and we cannot look elsewhere than to the adjoining Tamil coast for the origin of the northern population. The Tamil settlements were probably Orientally civilised communities, and, like Vijáya and his followers, far removed above the Yakkhas, who peopled the lower parts of the Island.

To show the influence of the Tamils and the numbers in which they were present in the Island, we have numerous passages in the *Maháwan̥sa*. It is a remarkable fact that Tamil armies seem to have fought all the great battles. King Siri Sańghabodi, who had fled to India, came back with a large army of Tamils. Jethatissa, hearing this, sends his general to India to raise another army of Tamils; and chapter XLIV. of the *Maháwan̥sá* relates how a great battle was fought between these two Tamil armies. We may refer to chapter XLV., which relates how Mána drove away the Tamils from their offices, in consequence of which they sent a message to Hatha-dátha, who had fled to India, inviting his return. In consequence Hatha-dátha seizes the capital, and proclaims himself king by the name of Dathopatissa. In chapter XLVI. is narrated how Pothakutha, a Tamil, seizes the government. Chapter XLVII. narrates how Mánavamma goes to India and serves king Narasin̥ha, who furnishes him with an army. He invades the Island, is defeated, returns with another army, wins a battle, and succeeds to the throne.

These are not battles between Tamils on one side and Siṇhalese on the other, but fought with Tamil soldiers on either side.

In chapter L. is the invasion of Ceylon by the king of Páṇḍu, whose object seems to have been to collect booty. In chapter LI. is related how a prince of the royal family of Páṇḍu, having a design to gain the sovereignty at Madura, comes to Sena II., who takes this opportunity of recovering the treasures taken away by the late invader, and joins the pretender. They succeed, Madura is captured and pillaged, and the booty brought back. Chapter LIII. relates how king Páṇḍu fled from the kindred tribe of Chólians and landed at Mahatitta, but got no aid. The king of the Chóla kingdom followed and carried away the crown, but failed in Ruhuṇa, and had to return to India. It is mentioned in chapter LXXXIII. that the strong men of the Tamils had built themselves fortresses, and taken hold of divers parts of the Island. In the same chapter it is mentioned that a host of men, forty thousand strong (not invaders), under two Tamil kings, Mágha and Jaya Báhu, consisting of Tamils and Keralas, were harassed by the Siṇhalese,—that the Vannian (Tamil) princes were brought into subjection. When these independent Tamil kings were harassed they said, "Yea, even some of our Tamils are amongst his servants," that is, as soldiers of Parákrama Báhu. The immigration and settlement of such large bodies of Tamils is a factor in the consideration of the ethnology of Ceylon.

Even in more modern times the immigration of the tribe of the *Mahábadda* people from India, who have adopted the Siṇhalese language and the profession of Buddhism, of which they are the most ardent of followers, places another factor for our consideration. In chapter LXI. an invasion of a different character by an "Áryan" is thus related :—

Now, at that time, a certain valiant and furious man, named *Víradeva*, who was born in the country of Áryas, and was chief of the *Palandípa*, landed at Mahahátittha with mighty men, thinking that he could take possession of Laṇká.

This invader routed the king and his army, but was evidently overcome by numbers, the king Vikrama Báhu having "sent his great hosts after him."

I must now close this part of the inquiry, showing that a Tamil element, quite independently of that which may have existed at the time of Rámá and Rávaṇá, had, since the alliance of Vijáya with a princess of Madura, pervaded the Island in a very large proportion. Vijâya himself and his seven hundred followers most probably spoke the Telugu language, which was at one time preponderate in Southern India, and has only in the course of time given way to the encroachments of the Tamil dialect, owing to the superior enterprise of the Tamil-speaking branch of the Dravidians. It is in India, particularly in Southern India, that we must seek for points of comparison, in the written characters, in the comparison of terms free from a Sanskrit derivation, in the costumes of men and women, in the jewellery and distinctive caste ornaments, in the preparations of food, in the use of musical instruments including those of exclusively domestic use, in the village games, in the observance of holidays and festivals, in the folk-lore, in the physical resemblances of the different castes, and in the moral character of the people.

The Post-Vijáyan Myth. What was the Non-Dravidian Element?

On the death of Vijáya without issue, ambassadors from Ceylon went to his brother Samitta, who called upon his sons to elect amongst themselves which of them should succeed Vijáya. The youngest, named Páṇḍuvisadewa, is said to have volunteered to succeed Vijáya. The name of this prince is strongly suggestive of a Páṇḍiyan origin. Incidents of this kind are historical in character, but begin to be doubtful when interwoven with a mythical story. The Buddhist annalist interpolates a story that the paternal uncle of Buddha had a son, the Sákya Páṇḍu, who was

pestered by suitors for his daughter's hand, and to avoid their importunity secretly sent her adrift in a boat with thirty-two female attendants. They are so fortunate as to be cast ashore in Ceylon after Páṇḍuvisadewa had, with thirty-two followers, established himself at Upatissa. The marriage of the prince and his thirty-two men with the princess and her thirty-two maidens followed as a matter of course.

This story, following as it does the similar story in connection with Vijáya, throws great doubt on the latter story. I observe that the learned translator of the *Maháwaṉsa* assumes that the princess and her maidens were sent adrift in the Ganges, which to any one who knows the navigation of that river and of the Bay of Bengal makes the story doubly improbable. That a father should imperil his daughter in this manner is against nature, and the motive for his inhumanity is insufficient. It is much to be regretted that if there was a basis of fact in the emigration of the princess a myth should thus have been interwoven with her story. The name of her father, Sákya Páṇḍu, suggests the same nationality as that of the Prince Páṇḍuvisadewa. The relationship to Buddha was probably added to flatter the royal family who had commanded the completion of the national annals.

Casie Chitty ("Gazetteer") says it was a misfortune that when the Siṉhalese occupied Kalinga (modern Cicacole) in the Northern Circars of the Coromandel Coast (between Gangam and Masulipatam) they should have been subject to the Káliṉgas, and that after emigrating to Ceylon they should have submitted to the rule of the Telugus and Tamils. Casie Chitty alludes to the opinion prevailing with some, which ascribes to the Siṉhalese a mixed origin, partly Telugu and partly Tamil.

In all investigations on this point we have to be guided by the fact that the Siṉhalese language is a distinctive one, and which competent authorities have classified as non-Dravidian. Had Ceylon not been an island subject to constant incursions from the adjoining continent, this

consideration would be a very weighty one. But we have the instance of Great Britain, throughout which the Anglo-Saxon language prevailed, and is now spoken, as English by the Scotch, the Irish, the Welsh, and Cornwall Celts. Though the names of localities may be Celtic or Scandinavian, the language of the country is English. We cannot argue from this fact that all Irishmen are descended from the Anglo-Saxons, or that the Welsh are not indisputably British.

In like manner we have in Ceylon Tamil names of places inhabited by a people who now speak Sin̥halese. Take, for instance, the names of streams. In the division of the Girawá Pattuwa there are three main streams discharging into the sea, the *Kahawatta-áru* at Sínimódara, the *Kirama-áru* at Tan̥galla, and the *Úrubokka-áru* at Ranné. In Girawá Pattuwa west the *Kachchigal-áru* is the western boundary of the division. On the eastern boundary of the Mágam Pattuwa is the *Kumbukkan-áru*, and the *Kirinde-áru* cuts across the centre of this Pattuwa. If one studies the etymology of places in Great Britain the derivation at once indicates where a Celtic or Scandinavian settlement had existed, though English may now be the spoken language of such places.

This is the only way in which we can explain the Tamil terms in the Tan̥galla and Hambantoṭa Districts. If we go higher up the east coast we come to the Tamil population of the Eastern Province, including the Mukwas, who have a custom common with the Nairs of India, namely, that ancestral property devolves to the son of the deceased's sister.

The Mukwas are said to have emigrated to Ceylon to avoid the Muhammadan persecution in India, first landing at Kudrumale. Like the Sin̥halese, the men do not perforate their ears. In this connection may be mentioned the Kandyan custom of polyandry, also in common with the Nairs of South India as well as the inhabitants of Thibet. In the *Mahábhárata* five Páṇḍuwa brothers are said to have observed this custom.

In addition to the caution that the Siṇhalese language is not Drávidian, we have, therefore, the existence of this and other peculiar customs showing that certain tribes had found their way to Ceylon; and we must not shut out of consideration ancient communication with Mánipur or Burmah, or even Thibet, or (if we are to reject that idea) emigration from those countries or from the Straits. In our present state of knowledge we must preserve a saving clause that, besides Drávidian emigration and the aboriginal population preceding it, there is evidence of the presence in Ceylon of a non-Drávidian element which gave a national language and names to the mixed population of the Island. Neither the mythical story of Vijaya nor that of Páṇḍuvasadewa's bride can sufficiently account for a large population of a non-Drávidian nationality.

As for the Drávidian population, I need only point to the specific mention in the *Maháwaṇsa*, not only of the Cheras (called Keralas), the Chóḷians (or Chóḷas), and the Páṇḍiyans, but of the Maravers (or Dewas) and Kallers, as furnishing some of the armies that made Ceylon a battle ground. The Kallers as well as the Maravers (or Vannian caste), peculiar to South India, furnished the fighting men of the predatory chieftains called Polygars, who gave so much trouble to the East India Company. Their locality was chiefly in the Ramnad's country, of which the port is Dewapatnam. The *Maháwaṇsa* has to be compared with Dr. Caldwell's "History of Tinnevelly" to identify these races, which can be done in a very satisfactory manner.

It is most interesting to compare even printed texts in Telugu, Tulu, Konkain, Canarese, Malayáḷam, and Burmese. It should not be forgotten that in Great Britain English is printed in the characters of the Roman alphabet, so that when the characters of the Siṇhalese alphabet are identified they will also be most probably identified as having belonged to a nationality of greater civilisation than its predecessors in the Island, and which had accordingly left this stamp of its civilisation as evidence. The Siṇhalese bear an undeniable

resemblance to those of the half-a-dozen languages or dialects I have referred to just now, and this suggests a large field of inquiry, without the investigation of which we cannot state with certainty what was the exact character of the nationality which was non-Drávidian.

Note A.

The King Páṇḍava, or Páṇḍu, was so called from most ancient times as preserved in the oldest Tamil traditions. Dr. Caldwell says the name "Páṇḍya" is written in Tamil "Páṇḍiya," but the complete Tamilised form is "Páṇḍi." He also says that there are geographical stanzas current in Tamil, giving the boundaries of the Páṇḍiya kingdom, as the river Vettáru to the north, Kumari (Cape Comorin) to the south, the sea (that is the Gulf of Maṇṇár and Palk's Straits at the Bay of Toṇḍi) to the east, and "the great highway" to the west. In touching on the Páṇḍiya kings Dr. Caldwell, in his "History of Tinnevelly," says that when the Drávidas are mentioned as distinct from the Chóḷas, as they sometimes are in the *Mahábhárata* and the *Puráṇas*, the Páṇḍiya must be meant. Dr. Caldwell refers to inscriptions and lists of kings going back to a remote antiquity. In a note to Dr. Vincent's translation of the *Voyage of Nearchus* (that is, in the time of Alexander the Great), he says: "The Court of Pandion was at Madura, called Modusa by Pliny, and Modoora by Ptolemy, and by both placed far inland from the coast of Malabar, agreeing with its actual site." In the *Voyage of Nearchus* (of which Dr. Vincent gives the full text and translation) the Indian coast is described down to, and round, Cape Comorin, and the description of India ends in these words: "And this whole southern continent (or as Dr. Vincent puts it, 'southern point' of the continent,) is part of Pandian's dominions." In fact, the Tamil race, called in Sanskrit the Drávidas, were divided, as proved by Dr. Caldwell, into three great divisions, the Cheras, the Chóḷas, and the Páṇḍiyans, the names being derived from three brothers who ruled together at Korkair, or Kolkei, near the mouth of the Tamraparni.

Note B.

See Mr. Parker's clear identification of the Devas, Nágas, and Yakkas in this Society's Journal (vol. VIII., No. 27, 1884, p. 84). In Nága-dípa, Northern Ceylon, only Nágas, who lived by land and water:

The Devas in the Central Province. In Anurádhapura both Devas and Nágas. The Indian Nágas also possessed the means of passing over the seas. See Nágapatnam and Nágarcoil on the Coromandel and Malabar coasts, respectively, and the Nága temples in those places. See also the small Nága temples and Vishṇu temples attached to some Buddhist temples in Ceylon. See the town of Devapatnam in India. The queens of the kings of Kandy were termed *Devi.* See the names Aṣóka, Devanampiya, and Páṇḍuwasa Deva. Considerations like these will supply materials for another Paper. This note is only to suggest the separate origin of the people of the Northern and Eastern Provinces on the one hand, then of the people of the Central Provinces, and to distinguish both from those of the Southern and other parts of Ceylon.

3. The following remarks by Mr. KASSIPILLAI TISSANAYAGAM were read by Mr. F. H. M. Corbet by permission of the Meeting :—

I AGREE in the main with the learned Advocate, but I beg to make the following observations :—

Ravana's Period.

(1.) The author of the *Ramáyaṇa* calls Ceylon Lan̥ká, and its people Rakshasas. Lan̥ká means an island. Rakshasas and Vanaras are not Aryans ; still, their names such as Hanuman, Vibishana, Indrajit, Maricha, &c., seem to be Sanskritic. According to the *History of Madura*, Ramá is said to have passed through the Madura country during the reign of Anantakuna Páṇḍiyan, who lived about 2,200 B.C.

(2.) The pre-Vijayan Ceylon was known to the ancient Tamils as *Íḷam* (ஈழம்). This corresponds to the Sin̥halese word *Eḷu.* The correspondence is most striking. The people who are most likely to know much about ancient Ceylon are its immediate neighbours, the Tamils. The *History of Madura*, written in the eleventh century, and the *Ramáyaṇa* (the greater part of which must have been elaborated from the inner consciousness of the Indian Homer) do not afford sufficient information as to the nationality of the original inhabitants of Ceylon.

Vijayan Epoch.

(3.) There never lived in Ceylon a people who called *themselves* Yakkas. On account of their resemblance to the barbarous tribes in some parts of Bengal, Vijaya and his followers called the aborigines by that name, as the

Portuguese in modern times thought the Tamils of Ceylon to be Malabars.

Non-Drávidian element.

(4.) Notes two and three lead me to the conclusion that the original inhabitants of Ceylon were the Eḷu people, the country they inhabited the Eḷu country, and the language they spoke Eḷu.

(5.) Eḷu was the non-Drávidian element, which was also non-Áryan at the same time. The grammatical constitution of the Siṉhalese language, notwithstanding the overwhelming number of Sanskritic words, betrays its non-Áryan origin. Languages there are which have borrowed relative pronouns from other stocks. But, is there any typical Áryan dialect which has no relative pronouns ?

(6.) The problem about the written characters of the Siṉhalese alphabet seems to me to be the least difficult of those suggested by the Paper. The Siṉhalese characters are a modified form of the Telugu characters. Telugu, Canarese, and Malayáḷam characters are modifications of the Karnataka. Vijaya was at least a semi-Telugu prince, and most probably was acquainted with the Telugu language, as we may naturally expect a knowledge of English from a German prince. Moreover, there used to be intermarriages between the Káliṉga and Vaṉga royal families. The Drávidian dialect that has the largest Sanskritic vocabulary is Telugu. By straining the meaning of the words, I may say Telugu was Vijaya's mother-tongue. Tamils easily acquire a knowledge of Telugu, which would have been the most convenient medium of intercourse between Vijaya and his Tamil consort. Still, I would not go so far as to say that Vijaya and his followers spoke Telugu in Ceylon, though the Telugu character has been borrowed by the Siṉhalese. The aboriginal language had in all probability no written alphabet. The late Hon. James de Alwis points out in his *Sidat Saṉgaráwa* certain Siṉhalese letters which most resemble corresponding Tamil letters. A closer study would probably lead to the discovery of closer resemblance between the Telugu and Siṉhalese characters. A perusal of Dr. Burnell's *Palæography of Southern India* throws considerable light on the subject.

(7.) A careful study of the philology of Eḷu words by intelligent and unbiassed scholars would show to what languages the original language of Ceylon is most allied. Only those words in the Eḷu vocabulary not allied to Sanskrit must be studied first. I do not think that all the words *now* considered to be Eḷu are pure Eḷu. There are Sanskrit words in Tamil so disguised that their origin is not easily discernible.

Syllabus.

I.—Sinhalese language :—
1. Basis, Elu.
2. Words, Śanskritic.
3. Characters, Karnátaka.

II.—Sinhalese people are a mixture of :—
1. Yakkas or Elus.
2. Semi-Telugus.
3. Tamils.
4. Telugus.

III.—Sinhalese dress :—
1. Low-country, Malay dress.
2. Kandyan women, Indian costume.

4. The following note contributed by the Hon. Mr. PÁNABOKKE was also read by Mr. F. H. M. Corbet by permission. Mr. Pánabokke wrote :—

WE do not think it requires a great effort to prove that all the writers on the early history of Ceylon are agreed that this Island was inhabited before the Vijayan era.

The *Ramáyaṇa*, according to native chroniclers, was composed in the year 2,387 B.C. It treats, as we all know, amongst other things, of the war waged between Ráma and Rávaṇa, a king of Ceylon. It is a palpable truism which requires no proof that for a conquest, the existence of a people should be presupposed. The theory that the inhabitants of this Island before the Vijayan period were *Yakku*, whereby we understand non-human beings or demons, will not be seriously stated as a fact.

Writers, both European and native, have in the present century conclusively demonstrated that the aboriginal inhabitants were human beings.

Taking then these two facts for granted, that Ceylon was inhabited, and inhabited by human beings, the questions which suggest themselves to us are, who were those aborigines ? and where did they come from ?

The late Hon. James de Alwis, that eminent scholar, in his Introduction to the *Sidat Sangaráwa* (at page XII.) reasons thus :—

Situated at no great distance from the Indian Peninsula, probably joined to it by an isthmus which has been washed away ; and invited by the advantages which it possessed, amongst which were its elephants and pearls, not to mention the fertility of its soil, the salubrity of its climate, and the richness of its natural productions, it is but reasonable to suppose that the Indians (unquestionably a very ancient race of people) had settled in Ceylon before the period referred to (*i.e.*, Vijayan period) ; if indeed their settlement was not coeval with their occupation of India.

Sir William Jones, as quoted by De Alwis, on the same page, says :—

We come back to the Indian islands, and hasten to those which lie to the south-east of Silan or Taprobane, for Silan itself, as we know from the language, letters, religion, and old monuments of its various inhabitants, was peopled by the Hindú race, and formerly, perhaps, extended much further to the west and south, so as to include Lanca or the equinoctial point of the Indian astronomers.

Beyond these facts (which to our mind are incontrovertible) we may well ask, what affinity is there between a Sinhalese man and a Tamil? Their manners, customs, and languages differ diametrically. We think the same eminent writer has proved conclusively that the Sinhalese language is directly derived from Páli, and has no affinity to Tamil or even to Sanskrit. These are deductions from well established facts. But the Sinhalese can boast of better evidence. Their national history, dating from several centuries before the birth of Christ, does not even allude to anything like a Tamil origin.

We think our ground is indisputable that the Sinhalese are direct descendants of the Áryan race, or, in the words of Sir William Jones, of the Hindú race.

When reading a Sinhalese paper only a few days ago we came across a letter written by a learned friend pointing out the striking resemblance, even at the present day, between the manners, customs, and dress of the people of Central India and the Sinhalese, and vehemently deploring our mad attempt, in modern times, to exchange these for foreign manners, customs, and dress.

We are certain that our friends in the Southern Province will agree with us that *áru* is not a common name for those streams to which the writer draws attention to show our Tamil origin.

It is a misconception on the part of the writer to suppose that a certain Buddhist image in Anurádhapura, to which he refers, shows a thread sculptured on it. It is nothing but the edge of the robe. We have verified this fact through a friend since we saw the Paper in question.

5. Mr. C. E. H. Corea then addressed the Meeting.*

6. Before Mr. Corea had completed his speech, the President remarked that if there were others who wished to speak, it might perhaps be desirable to adjourn the discussion.

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* Mr. Corea's remarks will be found on page 260, in the account of the adjourned discussion on Mr. Nell's Paper. As Mr. Corea there recapitulated what he said at this Meeting, it is unnecessary to insert his remarks here.

7. In view of the lateness of the hour, and in order to give other Members an opportunity of taking part in the discussion, the Honorary Secretary moved, and Mr. Ranasiṅha seconded, the adjournment of the Meeting, which was unanimously agreed to.

8. Mr. F. C. ROLES inquired if it was not the fact that Mr. Corea was in possession of the house, and would be entitled to continue his remarks at the next Meeting.

The PRESIDENT ruled that Mr. Corea would be so entitled.

9. The Hon. Mr. RÁMANÁTHAN then moved a vote of thanks to the Chairman, and to Mr. Nell. He believed Mr. Nell was ill, and he had no doubt he (Mr. Nell) would be pleased to know that his Paper had been appreciated. He had no doubt all would agree with him that Mr. Nell's intention was nothing but to suggest a few facts for the consideration of that deeply interesting problem. He seemed to have taken advantage of the leisure afforded him during his illness to pen a short Paper on a deep subject, and he (the speaker) was sure they would accept in a proper spirit Mr. Nell's kindness, and the interest he had taken in preparing that Paper for them. Mr. Nell called it only a "suggestive Paper," and there were other arguments which might have been urged, but which he was unable to go into fully. He (the speaker) would not now express his opinion on the arguments urged on the other side, but he thought that Mr. Nell deserved their thanks for writing so suggestive a Paper.

The Hon. Mr. SENEVIRATNE seconded, and the motion was agreed to. The Proceedings then stood adjourned.

Council Meeting.

Colombo Museum Library, November 4, 1892.

Present :

The Lord Bishop of Colombo, President, in the Chair.

Mr. F. H. M. Corbet.
Mr. W. P. Ranasinha.
The Hon. J. A. Swettenham, C.M.G., Vice-President.
Dr. W. G. Vandort.

Mr. E. S. W. Senáthi Rája, Honorary Secretary.
Mr. Gerard A. Joseph, Assistant Secretary.

Business.

1. Read and confirmed Minutes of Meeting of Council held on March 15, 1892.

2. The following gentlemen was elected Resident Members :—

T. B. Yatawara	nominated / seconded	by	S. M. Burrows, C.C.S. / M. S. Crawford, C.C.S.
K. A. J. Pohath, Mudaliyár	nominated / seconded	by	F. R. Dias. / G. Wall.
J. A. Henderson	nominated / seconded	by	G. Wall. / J. H. Renton.
J. D. Casinader	nominated / seconded	by	S. F. Nagapper. / W. N. S. Asserappa.

3. The President announced that Mr. W. H. G. Duncan having in June, 1892, resigned his appointment as Honorary Treasurer, in consequence of leaving the Island temporarily, the Council had in July resolved, by Minutes recorded on Circular No. 60 of May 21, 1892, to request Mr. F. H. M. Corbet to accept the office, and that Mr. Corbet had consented to act.

Resolved,—To confirm the appointment, pending the next Annual General Meeting.

4. The President announced that the Council had resolved, by Minutes recorded on Circular No. 106 of July 26, 1892, to request Professor T. W. Rhys Davids to represent the Society at the Ninth International Congress of Orientalists held in London from September 5 to 12, 1892.

Resolved,—To confirm the appointment.

5. Laid on the table letter No. 133 of October 29, 1892, and connected papers, from Mr. H. C. P. Bell, C.C.S., Archæological Commissioner, anent the balance of the Anurádhapura Excavation Fund.

Resolved,—As time did not permit of going into the question fully that the Papers be circulated.

6. The President submitted to the Council that it was undesirable that voluminous communications containing a fresh mass of materials should be read before the Society in the course of the discussions on a Paper. His Lordship pointed out that such communications ought to be brought before the Society in the form of Papers, after having been submitted to and passed by the Council.

Resolved,—That this Council do heartily endorse his Lordship's views, and desire his Lordship to announce them to the Meeting convened for that evening.

General Meeting.

Colombo Museum Library, November 4, 1892.

Present:

The Lord Bishop of Colombo, President, in the Chair.

Mr. J. H. Barber.
Mr. F. H. M. Corbet.
Mr. D. C. Pedris.
Mr. H. P. Perera.
Mr. W. P. Ranasiṇha.
Mr. A. T. Shamsuddin.
Hon. J. A. Swettenham, C.M.G., Vice-President.
Dr. W. G. Vandort.

Mr. E. S. W. Senáthi Rája, Honorary Secretary.
Mr. Gerard A. Joseph, Assistant Secretary.

Visitors :—About twenty-five gentlemen.

Business.

1. Read and confirmed Minutes of Meeting held on October 10, 1892.

2. It was announced that the following Resident Members had been elected, viz.:—Mr. T. B. Yatawara, Mr. K. A. J. Pohath, Mudaliyár, Mr. J. A. Henderson, and Mr. J. D. Casinader.

3. The President stated the object of the Meeting, and added that as the importance of the subject had led to an adjournment of the debate, the Council had thought well that he should remind Members what the nature of their business properly was. *In cases of an important or lengthy kind, masses of information could only be communicated to the Society in the form of Papers : Papers laid before that Society were documents which had been brought under the consideration of the Council of the Society, and the value of which the Council had had an opportunity of guaranteeing to the Members it invited to hear them: any other Paper would be out of place in the discussion.*

Properly speaking, what should follow upon the reading of a Paper was not the communication of other masses of information, but remarks arising out of that Paper, and it was not, he thought, according to the Proceedings of that, or of any similar, Society that such remarks should extend to any great length.

The Council had recommended him, however, to allow a certain amount of departure from the strict order of business, and to allow Members who had put what they intended to say in the form of Papers to read such Papers; but it must be understood *that was not to become in any sense a precedent for the future, nor were the Papers to be*

regarded in the sense of Papers submitted to the Society. Again, *it was not to be regarded as permissible for an absent gentleman to send in his remarks as a Paper to be read to the Meeting*, although, as Mr. Corea was in possession of the Meeting, a Paper he had sent to be read in his absence would be allowed.

4. The following remarks sent by Mr. C. E. H. COREA were then read by Mr. F. H. M. Corbet, by special permission :—

Ethnology of Ceylon.

I HAVE not much more to say in continuation of my remarks on Mr. Nell's Paper, but I am compelled to recapitulate much of what I have already said.

At the last Meeting, I essayed to draw attention to the fact that the Paper teems with fallacies in the method of its reasoning, and to warn Members against the numerous assertions of the writer which do not seem to be warranted by historical circumstances.

Among several such *ipse dixits*, I drew attention to the assertion that "Princess Suppadévi, Vijaya's grandmother, seems clearly to have been a Telugu princess." The writer should be aware that all that is known of this princess points to her having belonged to the Káliṅga Vaṅga race of the Mágadha country, the head centre of the Páli language. The *Vishṇu Puráṇa* enumerating the peoples of Sáka Dvipa, says that of them "the Mágadhas are an exclusively Kshatriya race." In the method of reasoning adopted by the writer is that the inserting of statements of this nature in a parenthesis or incidentally, and afterwards using them as *facta probantia* of important questions, is to be deprecated, as they are apt to be taken for proven facts.

I pointed out that he speaks of the *Íḷavers*, a low-caste tribe of South India, as Siṅhalese, as if it had been incontrovertibly proved that these *Íḷavers* were Siṅhalese, without proof being in any way offered. The writer is saved from the necessity of working out his premises to a conclusion by the precaution he took at the outset to say that the Paper is merely a "suggestive" one, though (if I am not mistaken) but a few lines previous he had stated his intention to be to prove everything historically.

Of the many self-infirmative facts recorded by Mr. Nell, one which occurs at the very commencement of the Paper is sufficient in itself to cut the ground from under the writer's feet. I refer to the statement that people along the western coast and throughout the Southern Province speak of the Kandyan Provinces as "Siṅhala," or "the Siṅhalese country," and distinguish themselves from the Siṅhalese.

This fact, when taken with the following admissions made by the writer, namely: (1) that his remarks do not apply to the inhabitants of the central region "in the Siṇhalese country proper"; (2) that the name Siṇhalese is now erroneously given without any discrimination to thousands of other races who populate the country, who have no claim to the name; and (3) that there is no doubt that other races had from early times settled in Ceylon "distinctively" from the Siṇhalese—simply goes to prove that Mr. Nell is only labouring to show that certain peoples, living on the western, southern, eastern, and northern coasts of Ceylon (but who according to his own statement have no claim to be called Siṇhalese), are not of Áryan but of Drávidian or mixed descent—a fact which I am sure no one has thought of disputing.

The Paper might therefore have been allowed to pass unchallenged, but for the fact that the writer calls upon us to adopt the fact that some tribes or peoples of Ceylon are Drávidians, or mixed, as suggesting that *all* are so. It is therefore the very *suggestiveness* of the Paper that provokes discussion. For to induce suggestions the writer takes up matters of history which affect the real legitimate Siṇhalese people, and handles them in a manner which calls for criticism. It is thus necessary to analyse the historical merits of the Paper, which will be found to be equally misleading as its method of reasoning.

First, Mr. Nell would suggest a non-Áryan origin to the Siṇhalese language from some resemblances which he has found to exist between some of the letters of its alphabet and the character of certain non-Áryan languages. Next, he relates the narrative of the *Ramáyaṇa*, and the fable of Prince Vijaya's leonine origin, with the object of interpolating certain gratuitous statements, such as that no Áryan settlement was established in Ceylon before Vijaya's arrival, and that Vijaya himself was a non-Áryan Prince who spoke the Telugu language, and that the Páṇḍiyans by whom the Vijayan colony was largely re-inforced were Tamils; and, lastly, under the title of the post-Vijayan myth, he labours to show that Tamil soldiers were often employed by Siṇhalese Sovereigns in their battles, which no one ever denied.

The writer seems unconscious that the very fact that the *Maháwaṇsa*, which is his only authority all throughout, scrupulously mentions the various tribes of mercenaries in the Siṇhalese armies by their distinctive names, and contains not the remotest suggestion of any social connections between them and the Siṇhalese, clearly proves that the latter reserved a scrupulous and religious distinction between themselves and those heterogeneous nationalities.

With respect to the history of the Siṃhalese language, I pointed out that the results of the researches of eminent philologists, such as Max Müller, Kühn, and many others, have conclusively proved that our language is a pure and distinctive Áryan language—the proofs which have led to this indisputable conclusion being too numerous to be recited in the course of these remarks. I also drew attention to the fact that while Mr. Nell writes in ignorance of the languages to which he would trace an affinity to the Siṃhalese language, and of some of which he had only casually seen the written character, the learned philologists upon whose authority the Siṃhalese language stands proved to be Áryan were obviously more competent to determine the merits of the resemblances, of which Mr. Nell makes capital, as they have made a study of those languages also contemporaneously with the Siṃhalese.

Mr. Tissanayagam, in his remarks on this part of Mr. Nell's Paper, commits the blunder of deriving Eḷu from Telugu.

Relying on this fact, about which the highest and most competent authorities are unanimously agreed, viz.: that the Siṃhalese language is an Áryan dialect, we attain a position from which all the theories of the writer can be overthrown. For the next step in the inquiry into the history of this language leads us to another most important discovery, namely, that it was the "language of the land" before Vijaya's arrival. For the proofs of this statement I need only refer to the Introduction to the *Sidat Saṃgaráwa*, by the late Hon. James de Alwis, where he enters into the question in detail, and proves the fact by a complete chain of evidence.

This then being the fact, can it be disputed that the Áryans had established a people and a language in the Island long before the conquest of Vijaya. Whoever the aborigines were, the people whom Vijaya found in the Island were Áryans. Thus the contention that the Vijayan colonists, by possible intermarriage with the pre-Vijayan inhabitants of Laṃka, introduced a non-Áryan element into the nation, is completely disposed of.

The suggestion that Vijaya himself was non-Áryan seems almost too absurd to notice. If this contention is meant seriously, innumerable proofs can be brought forward to show that Vijaya and his 700 followers were Áryan Kshatriyas of Mágadha, anything in the realms of fable to the contrary notwithstanding.

That the story of the lion was a pure invention of the poet, introduced merely to "lend interest to his narrative," which was intended for the "delight and amazement" of a primitive people, is proved from the fact that the authority upon

which the derivation of the name "Sinhala" is founded, namely, the ancient *Aṭuwáwa*, or Commentary, has not the remotest suggestion of a royal princess' intrigue with the king of beasts. The *Aṭuwáwa* (which was not written for the "delight," but for the instruction, of men) simply says that it was because Sinhabáhu captured the "Sinha," that himself and his people were called Sinhala :—*Sinhabáhu narindóso Síhamádinavá iti Sihalotena sambandhá ahusabbapi Sihalá.* The "Sinha" clearly meant being the city "Sinhaya" on the banks of the Gunduk in Behár, whence the Vijayan colonists came.

Then comes the question whether the intermarriages with the Páṇḍiyans of the Madura country affected the purity of the Áryan race of Sinhalese. In the first place the known existence of the most stringent caste rules among the Áryans of Vijaya's time, which had the force of positive law, and were enforced by judicial tribunals, and which visited the marriage of an Áryan with a non-Áryan, not only with illegitimacy, but with the most degrading punishments, raises the strong presumption that Vijaya having found Áryan women in the land he conquered and as beautiful as Kuweni, would not have gone over the sea in search of degradation and shame, and at the risk of violating the strong and inherent prejudices of his people. It is against all probability, therefore, that the princess Vijayi and the noble virgins of Madura were non-Áryans. The non-Áryans of South India were at this period regarded as beings with whom the "sons of gods" would have no communion, and intercourse with whom was strictly forbidden to the "twice born," such as Vijaya and his seven hundred called themselves.

But we are not left in the doubtful regions of hypothesis, assumption, and probability in regard to the dynasties of South India. Positive historical evidence proves beyond all doubt that the Madura country was an early, probably the earliest, Áryan settlement in South India. The names Madura and Páṇḍava themselves point to an Áryan origin. Mr. McCrindle, "the latest translator and author of the *Periplus Maris Erythrei*," speaking of Madura (also called Mathura), says :—

> The city to this day retains its ancient name, and thus bears, so to speak, living testimony of the fact that the Áryans of Northern India had in early times under Páṇḍiyan leaders established their power in the southernmost parts of the Peninsula.

The names indeed are highly suggestive, but not in the direction that Mr. Nell thinks they point. For the Páṇḍavas, called also Páṇḍus and Páṇḍiyans, were one of the two most ancient of Áryan families in North India, the other being the

Kurus—the contest between whom forms the central story of the *Mahábhárata;* upon the authority of which we also have the invasion of the Deccan by the Páṇḍiyans.

Madura is clearly named after the sacred city of "the lunar race," Mathura on the Jumna, the birthplace of their hero-god, Krishna. According to the *Sthala Puráṇa*, a Madura work of great authenticity, the city was founded by Kula-sékara, who has been clearly identified with Siṃhabáhu, the grandfather of Buddha. Working upon purely Drávidian sources, Mr. R. Sewell traces the pedigree of Vijaya's Páṇḍiyan queen, who is thereby seen to have been the daughter of Amitodana, the uncle of Buddha and the sister of the Sákya Páṇḍu, whose daughter Bhaddakacchana was married to Vijaya's nephew and successor Páṇḍuvasadéva.

Mr. Nell says that to suppose the Páṇḍiyans to have been non-Drávidian, "we shall have to sweep away all the traditions, inscriptions, and chronicles of the Tamil race." It is unfortunate that he has not mentioned even one of these traditions, &c., which would so strongly corroborate his theory of the Drávidian origin of the Páṇḍavas.

Hitherto it had been supposed that all the traditions and historical records of Southern India insisted that the great dynasties of the Deccan (the Madura, Chóla, Kerala, &c.) were sprung from the "solar" and "lunar" races, which were the distinguishing denominations of the two great Aryan families of Delhi and Ayodya (Oude), respectively.

The only fact which at first appears to militate against our contention is that the Páṇḍiyans of Madura country are a Tamil-speaking race. Mr. Nell himself supplies us with the answer to this, when he mentions that the Brahmans (by whom he means Áryans) did not *conquer* South India as they did Northern India, but came in peaceably. In the north, the Áryans, whose invincible powers were then yet unknown, met with a stubborn resistance from the aborigines, and this necessitated their adopting a policy of extermination. The natives were either decimated in battle, or driven out, and in the north the occupation of the Áryans became wholesale. A perfect Áryan kingdom with an Aryan people was established, and therefore there the Aryan language prevailed. But in the south the necessity to entirely supplant the people did not arise. The awful reputation which the Áryans had gained in the north caused the gates of the southern cities to be opened at the first summons, and the Áryan leaders did not think it necessary to resort to the expensive policy of extermination which they had been obliged to adopt in the north, but were merely content with securing with the highest estates of society, and the people were allowed to serve them as plebeian subjects without

molestation. Thus, while the royalty and nobility were Áryans, the people were Drávidian, and the language of the people came inevitably to be adopted by the ruling class also. The Pándiyan royalty and aristocracy thus were Aryan, though they subsequently adopted the Tamil speech.

It is a significant circumstance that the *Maháwansa*, which records every Tamil invasion, never speaks of the Pándiyans as Damilos. On the other hand, whenever a marriage with the Pándiyans is recorded, it is stated that it is done in order to prolong and establish the purity of the race. Of King Vijaya Báhu I. it is recorded that he married first Lilávatí, "having satisfied himself of the purity of her race," and having no son by her, he made a princess of Kálinga, his Queen, "being desirous to prolong and establish his race." "And the king, who prided himself in his race," (*Maháwansa*, chap. LIX., 40) "sent forth and brought hither a prince of Pandu, born of a pure race, and bestowed on him his younger sister, the Princess Mitta." Thus all throughout the Pándiyans are spoken of as a race, intermarriage with whom only confirmed the Áryan purity of the Sinhalese.

It remains to consider what the history of the people was in subsequent times, when the country was overrun by innumerable, heterogeneous tribes. The existence and strict observance of the rule by which Sinhalese and Tamils of respectable castes do not intermarry is a living proof of how strictly purity of race has been preserved through all the vicissitudes of the Sinhalese history. The *Maháwansa* and all histories, while speaking of the existence side by side of various tribes, whose name is legion, always scrupulously distinguish the Sinhalese from them, and no amalgamation of people is anywhere recorded.

In conclusion I will mention one authenticated fact in our history, which is alone sufficient to prove that at a very modern period the Sinhalese people enjoyed a high reputation for the purity of its race among the Áryans of India. I refer to the intermarriage of the Sinhalese with the Rajputs of Mewar in the fourteenth century. After South India was converted to Hindúism, and the Árya and the Drávida joined hands in fellowship and association, an amalgamation of races and castes seems to have speedily taken place, leading to an enormous multiplication of castes by reason of various "combinations." But all through the Rajputs of Rajasthan, the proud descendants of the son of Ráma, the son of the sun, preserved their purity and their caste by religiously avoiding mixed marriages. On this account they were indisputably given pre-eminence among the Hindú kingdoms of India. In the fourteenth century they had long ceased

to have connections with almost all neighbouring tribes. And about the year 1300 A.D., Bheemsi, their king, finding no consort in India suited for his high descent, comes to Ceylon and espouses Princess Padmani, or Padmávati, the daughter of Vijaya Báhu (?), who takes with her to Rájaputana a large retinue of Sinhalese ladies and gentlemen, who contract marriages among the pure Rajputs. The grand story of the heroism of this Sinhalese princess, and the bravery of her uncle and nephew, Sinhalese princes—Gorah and Badul—is recorded in the annals of Mewar, and will repay perusal to all lovers of the beautiful, the good, and the brave. I mention the fact only as a proof, that so late as the fourteenth century the Sinhalese had the reputation of having preserved the purity of their Áryan descent.

5. Mr. W. P. RANASINHA said :—The conclusion which Mr. Nell wishes us to draw from his arguments is opposed to the traditions, chronicles, and inscriptions of the Sinhalese. Mr. Nell is struck with the so-called similarity of the Malayáḷam with the Sinhalese characters, the relation of the costume of the Kandyan women to that of the Tamil or Indian women, the affinity of the Telugu, Canarese, and Malayáḷam characters to the Sinhalese, the physical resemblances of the Sinhalese to the Drávidian races of South India, and infers that the Sinhalese are of Drávidian origin.

Having set up a theory founded on a superficial observation, he labours hard to give it a good foundation. Mr. Nell thinks, that just about the time that Buddha died the whole population of Mágadha should have been Buddhists, and concludes that Vijaya and his followers did not come to Ceylon from Behár, because some two hundred and thirty years after his arrival the resident Sinhalese had to be converted to Buddhism. Speaking of the reign of Parákráma, he says it is impossible to consider the sovereignty of a son of a king of Páṇḍu, who came from a part of India quite as distant as the territory of the Chólians, without concluding that there were Tamil settlements, however small, in the Ruhuṇa territory. What is Mr. Nell's authority for saying that Parákráma was the son of a Páṇdiyan king? He evidently is misled by the words in the *Mahávaṇsa*, where Parákráma is said to be a son of Páṇḍu. This Páṇḍu was not a king of Madura, but was the son of Vikrama Páṇḍu, who reigned in Ceylon in 1053 A.D.

The writer is also mistaken in saying that the Nátu Koṭṭaya Chetties and others of the tribe of Shanars worship Rávaṇá at Kataragama. The worship paid at Kataragama is not to Rávaná but to Kártikeya, the warrior-god of the Áryas, the *Kataragama Deviyó* of the Sinhalese. At

Anurádhapura Mr. Nell found the colossal figure of Buddha invested with the sacred thread like a Brahman. This turns out to be the hem of the robe.

Coming to the period when the king of Vaṅga married the daughter of the king of Káliṅga, Mr. Nell concludes "that the issue of that marriage was a Telangu princess." And he continues, "what is the conclusion we must draw from the marriage of Vijaya and his seven hundred followers with the ladies from Madura, but that their descendents were semi-Tamils? And the officers of state, the servants, and artisans, who are mentioned as immigrants to Ceylon from Madura, are likely to have come with their families, thus leaving purely Tamil descendants.

"The place where Vijaya had been sent adrift with seven hundred followers must have been on the sea coast, and at a not very great distance from Ceylon. And even if we do not assign to Vijaya and his followers a Drávidian birth, which is probable from his getting the daughter of the Páṇḍava of Madura, he and his fellow-settlers must certainly be held to have left Tamil descendants. To avoid this conclusion, we must either reject the whole story as a myth, or assume that the Páṇḍava was not a Drávidian, an impossible assumption, because we shall have first to sweep away all the traditions, inscriptions, and chronicles of the Tamil race," &c.

We do not think it would be right to discard the Siṅhalese traditions, inscriptions, and chronicles, which point to an Áryan descent, in favour of the Tamil traditions, inscriptions, and chronicles, which, Mr. Nell says, are opposed to them.

The Áryas were an energetic race, who, according to Max Müller, inhabited a country supposed to have been as far east as the western slopes of the Belurtag and Mustag, near the sources of the Oxus and Jaxartes. Some of them migrated to Europe, some to Persia, and some to India. Their language is supposed to have been Sanskrit. They had a religion of their own. They knew certain arts and sciences, and brought with them a system of astronomy, astrology, and jurisprudence, and the art of medicine, which were developed to a great extent after they had settled down in India. With their religion they introduced a system of caste.

According to *Amarakosha*, the Sanskrit vocabulary by Amarasiṅha, the division was as follows:—1, Brahmana, or the priestly class; 2, Kshatrya, the military class; 3, Vaisya and Sudras; the rest were all Mlecchas or babarians to the Áryas. Even the Dráviras, before they became converts to the Vaidic religion of the Áryas, were called Mlecchas. The Vaisyas were divided into three classes: the Bhu-vaisya,

the cultivators; Go-vaisya, the cattle keepers; and Vanig-vaisya, merchants. The Sudras were the artisans, who were divided into many classes, according to the kind of work in which each was engaged.

According to the *Abhidhánap-padípika*, a Páli vocabulary, the Kshatrya took precedence. This is the caste system which obtains in India as well as in Ceylon up to this date, in spite of the teachings of Buddha, who preached against it. This caste system, as well as the systems of medicine, astronomy, astrology, laws and customs, and most other things, were adopted by the other inhabitants of India who were non-Áryas, except perhaps the hill tribes and a few others who did not accept the civilisation which was thus introduced into India by the Áryas. The religious system which now prevails amongst the Drávidas is this Vaidic religion preached to them by the Áryan Brahmans. In Ceylon, the same gods are venerated by the Sinhalese Buddhists.

The mistake committed by Mr. Nell is in supposing that these are Drávidian institutious instead of Áryan. Hence he was surprised to find that Parákráma Báhu, when he attained his age, was invested with the sacred thread by Brahmans of his father's court. Says Dr. Caldwell :—

> The Brahmans, by whom the Áyran civilisation was grafted on the ruder Drávidian stock, laboured assiduously to extirpate the old Drávidian religion, and to establish their own in its room; and they are generally supposed to have succeeded in accomplishing this object.

Again, at page 519, he says :—

> The system which prevails in the forests and mountain fastnesses throughout the Drávidian territories, and also in the extreme south of the penisular, amongst the low caste tribes, and which appears to have been still more widely prevalent at an early period, is a system of demonolatory, or the worship of evil spirits, by means of bloody sacrifices and frantic dances. The system was introduced within the historical period from the Tamil country into Ceylon, where it is now mixed up with Buddhism.

These matters should be borne in mind in all questions touching the ethnology of India and Ceylon.

The system of caste and race distinctions having once taken hold of the mind of the people proved too strong even to the preachers of Buddhism to undo. To this I attribute the reason why races and castes remain unmixed up to this day both in India and Ceylon.

Now it is said in the *Maháwansa* that the king of Vanga, an Áryan prince, married the daughter of the king of Kálinga.

This marriage was not possible if the king of Kálinga was not of the same race as the king of Vanga. In the *Vishnu Purána* (book IV., chapter XXIII., p. 444) it is said that Bali's wife, by Dirghatamas, had five sons, Anga, Banga, Kálinga, Sahona, and Pundra; and their descendants and the five countries they inhabited were known by the same names.

This shows that Kálinga as well as Vanga was colonised by an Áryan race. And also, by the way, that polyandry was not unknown to the ancient Áryas. According to the *Maháwansa* Vijaya arrived in Ceylon in the year 543 B.C. This is disputed by some modern writers, but it is not necessary to enter into that question now. He need not have been necessarily a Buddhist. His religion may have been Vaidic, or, as it is now erroneously termed, Hindúism. He and his followers worshipped the gods of the Áryas as taught in the Vedas. The Brahmans were *purohitas*, even of the later kings of Ceylon who professed Buddhism, but at the same time worshipped the Áryan gods, as the Sinhalese do now.

Vijaya lived with Kuvéni, a native of Lanká, purely, I believe, for political reasons, till she gave birth to two children, Jivahatha and Disála. Vijaya's followers requested him to assume the office of king, but he, on account of his not having a queen consort of equal rank to himself, was indifferent at the time to his inauguration. The chiefs being desirous of the installation of the prince, sent to southern Madura a deputation with gems and other presents. They obtained an audience of king Pándava, and delivering their presents, announced their mission. "The son of Sinhabáhu named Vijaya, has conquered Lanká, to admit of his installation bestow thy daughter on us." King Pándava having consulted his ministers, decided that he should send his own daughter to Vijaya, and for the retinue of that king no less than seven hundred daughters of his nobility, with eighteen officers of State, together with seventy-five menial servants. Pándava despatched these maidens, bestowing presents on them.

It would indeed be as strange for an Aryan prince and the ministers of an Áryan race to solicit in marriage a princess of the Drávidian race, as for the powerful king of Madura, if he were a Drávidian, to send his daughter to be wedded to an adventurer of another race, in a country reputed to be inhabited by *Yakkó*, or cannibals. Careful research will show that the southern extremity of the peninsula of India was at this time colonised by the Áryas, the same enterprising race to which Vijaya belonged.

M. Kunte, B.A., in his "Vicissitudes of Áryan Civilisation in India," writes as follows :—

The same difficulties the ancient Áyras had to encounter in India. A settlement of the name of Chola was made. The south, into which Rámá had made an expedition, and in one or two parts of which colonies had been established, was not totally neglected.—Page 377.

The kingdom of Páṇḍyas, or the whites, flourished, exercising a general civilising influence on the Turanians, imbuing their minds with Áryan feelings and thoughts, and enlarging the forces of their observation and knowledge by directing attention to the Áryas in the north. The fertile and romantic banks of the Godáviri, the Káveri, and the Támbraparni proved too tempting not to attract numbers of Áryan settlers.

Again, at page 382, he writes :—

Áryan settlements in the south of India had also developed into flourishing kingdoms. The settlements of Chola, Pandya, and Kerala grew in prosperity and power.

His authority for these statements is, I find to be, the *Mahábhasya* of Patanjali.

Dr. Caldwell, in the introduction to his "Comparative Grammar of the Drávidian Languages," page 81, says :—

The immigration into Ceylon of Áryans from Magadha probably took place about 550 B.C., or at least some time in the course of that century; and I think we may safely agree that the Áryas, or the Sanskrit-speaking inhabitants of Northern India, must have become acquainted with and formed establishments in the Dekkan and Coromandel coast; and must have taken steps towards clearing the Dandakáranya, or primitive forest of the peninsula, before they thought of founding a colony in Ceylon.

This conjecture of Dr. Caldwell appears to have been made without an acquaintance with the *Vishṇu Puráṇa*, which is clear on this point. King Dasaratha had four sons, Ráma, Laksmana, Bhárata, and Satrughna. We know that Ráma and Laksmana conquered Laṅká. Of Bhárata and Satrughna the *Vishṇu Puráṇa* says (book IV., chapter IX., p. 385), Bhárata made himself master of the country of Gándharbas, after destroying vast numbers of them, and Satrughna, having killed the Rákshasa chief Lavana, the son of Madhu, took possession of his capital Máthura.

In note A, Mr. Nell remarks "that Dr. Caldwell says the name Páṇḍya is written in Tamil, Páṇḍiya, but the complete Tamilised form is Páṇḍi." The entire passage, as I find in Mudaliyár Wijesiṇha's translation of *Maháwaṇsa*, is as follows :—

The Sanskrit name, Panda, is written in Tamil, Pandiya, but the more complete Tamilised form Pándi is still more commonly used all over Southern India. I derive Pandiya, not from the Tamil and Malayálam Pandu, "ancient," though that is a very tempting derivation, but from the Sanskrit Pándu, the name of the father of the five

Pándava brothers. This very form, Pandiya, in the sense of a descendant of Pándu, is mentioned, as I am informed by Professor Max Müller, by Kátiyáyawa, the immediate successor of Panini. "History of Tinnevelly," chapter I., page 12.

If the ladies that came from Madura were Drávidian, and if Vijaya and his followers spoke Telangu, as Mr. Nell supposes, the language which descended to their posterity should have been Tamil or Telangu. But Mr. Nell himself concedes that the Sinhalese language is a distinctive one, and that competent authorities have classified it among the non-Drávidian. But competent authorities, such as the Hon. James de Alwis, Max Müller, and others, who have made a study of the language, not only called it non-Drávidian, but have distinctly pronounced the language to be Áryan.

On reading Mr. Beames's "Comparative Grammar of the Áryan Vernaculars of India" (viz., Sindhi, Hindi, Gujaráti, Bangáli, Oria, Maráti, and Panjábi), I was struck with the similarity of Sinhalese to these Áryan vernaculars, and the applicability of their rules to the Sinhalese language, and I was induced to write a Paper on the subject in the Journal of this Society in the year 1882, which was published in volume VII., No. 25. The late Professor R. C. Childers, the learned compiler of the Páli Dictionary, also wrote a paper on the proofs of the Sanskritic origin of Sinhalese, and it was published by the Royal Asiatic Society of Great Britain and Ireland in the year 1875. I have read Dr. Caldwell's "Comparative Grammar of the Drávidian Languages," but the rules that apply to those languages I find do not apply to the Sinhalese language.

The strongest argument that is adduced by those who allege that Sinhalese is a Drávidian dialect, is the want of the relative construction in the Sinhalese language as in Sanskrit; that is to say, in other words, that Sinhalese is not Sanskrit. Nobody says that Sinhalese is Sanskrit: what we say and what we can prove is that Sinhalese is a sister-language to the Áryan vernaculars of India, a corrupt and modified Prakrit; Prakrit being the parent of all these vernaculars, which was the language of the Áryans, after Sanskrit became a book language.

The cumbrous diction of the Sanskrit writers and unpronounceable words of that language have been modified in the modern Áryan vernaculars, and this is not to be wondered at when we consider that it took many centuries before these vernaculars became what they are at the present day.

Two hundred and thirty-seven years after the landing of Vijaya and his followers, Mahindu, the son of king Asóka, came to Ceylon, and wrote the *Atthakathás*, or commentaries to the Buddhist scriptures. If the language of the inhabitants

of Ceylon was Telangu or Tamil, he should have written them in one of those languages. But they were written in Siṇhalese.

The rock inscriptions of Ceylon should not be forgotten in an inquiry of this kind; some of them, according to Dr. E. Müller, are of the first century B.C. The characters are the old Nágari or Laṭ, and the language is a kind of Prakrit allied to Páli. Now there can be no doubt that these inscriptions were intended to be read and understood by the people, and hence, too, it might fairly be concluded that the people who inhabited the country were an Áryan race; and it is curious to find how the language and characters of these inscriptions gradually changed as time passed on, and how in the inscriptions between the fifth and ninth centuries the language becomes somewhat intelligible to the scholars of the present day, and the characters to some extent assume the present forms of the Siṇhalese alphabet. Even then the ordinary scholar, who is not acquainted with the old Laṭ characters, is not able to read them, owing to the occurrence of these latter characters in them.

I have to refer to plate No. 121 A, of "Ancient Inscriptions in Ceylon," by Dr. Müller. These inscriptions when carefully examined will show that the Siṇhalese characters of the present day were gradually evolved from the old Nágari or Laṭ characters, and not borrowed from Malayáḷam, Canarese, or Telangu, the similarity between these latter and the Siṇhalese characters being that they are round. To the iron style and the *ola* in which the Siṇhalese write their books is greatly due the present form of the Siṇhalese characters.

Before concluding this Paper I beg to draw your attention to another passage in Mr. Childers' contribution referred to, about the word Elu, which was said by Mr. Tissanayagam to be derived from the Tamil *Iḻam*. It is opposed to the rules of philology to derive one word from another, merely because the sound is similar. The derivation must be accounted for step by step by the well-known laws called phonetic rules. "Strange as it may appear," says Mr. Childers, "the word *Elu* is no other than Siṇhalese much corrupted. It stands for an older form *Hela* or *Helu*, which occurs in some ancient works, and this again for a still older *Sela*, which brings us back to the Páli form *Sihala*. For the loss of the medial syllable *he* compare the Siṇhalese *dola*, representing the Páli *dohala* and Sanskrit *douhrida*, and for the loss of the initial *s* compare *ira* = *súrya* and *úrá* = *sukara*." I may add that as to the change of *i* into *e*, compare Siṇhalese *velep* for the Sanskrit *vitapa*, "tuft" or "top branch"; Siṇhalese *vehera* for the Sanskrit *vihare*, a building in which Buddha's image is

kept. As to the change of *s* into *h*, and then the entire elision of it, leaving only the vowel, compare the Sanskrit *suci*, "needle," with the old Siṇhalese *hidi*, and the modern Siṇhalese *idi* in *idikatuwa*: we then have *Sinhala* in Sanskrit, *Síhala* in Páli or Prakrit. Long vowels are shortened in Siṇhalese, and we next get the word *Sihala* with a short *i*, as in the *Subbásita* of Alagiyawanna. The *h* was after a time not articulated, and the word was pronounced *Siala*, from which by changing the *si* into *hi* we get *Hiala*. This could not have lasted long owing to the hiatus, and the two vowels having coalesced it became *Hela*, and that which belongs to *Hela* is *Helu*. We read in the *Kávyasekhara* of Ṣrí Rahula Sthavira, of Toṭagamuwa :—

Utum me Bisósánd
Helu basini nisi padabeňda
Kiyanuwa banak soňda
Kalen árádana mahanada

Because this noble princess made a pleasing request (to me) to repeat a good bana in suitable verses in the *Helu* language.

By the elision of the aspirate *h* we next get the word *Eḷu*, and this is applied to Siṇhalese generally, and not necessarily to the pure Siṇhalese of the poets. For we find in the preface to an old translation into Siṇhalese of the *Ummagga Jataka*—a work read, and, with the exception of some words, understood by the Siṇhalese generally—the following :—

Budun desaná karaṇalada madhuravú Dharmmaya Budun vadále Magadha bhashawan vedeyi me nam Eḷuven vedeyi anadara nosita * * * gaurawayen sitahela isiya yutu.

Buddha preached his sweet Dharma in Magadha language, that is in Eḷu. Despise it not on that account, but listen to it with respectful attention.

This is an apology for writing a *bana* book in Siṇhalese.

So *Eḷu*, *Helu*, *Sihala*, and *Siṇhala* are one and the same.

As to the physical appearance of the Siṇhalese, this is what Professor Virchow says :—

All descriptions, and history confirmed by the Rámayána, as well as the Wijayan legend, show that there can be no doubt that the Siṇhalese face is an importation from the Áryan Province of the Indian Continent, while directly to the contrary, all observers ascribe to the Vedda face a foreign, and very frequently a Drávidian type.

6. Mr. SENÁTHI RÁJA strongly supported Mr. Nell's views. He said most of them were in the habit of taking their views

at second hand, and Mr. Nell's was a new departure in that respect. It was a bold attempt to break through the tyranny of blind faith and to make them judge for themselves as to whether certain theories hitherto taken for unquestionable articles of faith by them were actually founded on facts or were only hasty conclusions founded on insufficient data.

There could be no doubt that the Sin̥halese were a composite race, and that the Áryan was but a very inconsiderable portion, if any at all. The alphabetic system, a great many grammatical forms, and a whole vocabulary of words, were connected with the Sanskrit, Páli, &c. But that was easily accounted for. Buddhism had been the chief religion of the country for many centuries, and most of the Buddhist books were in Páli. Thus the Sin̥halese language had become modelled on the Áryan method, and the Sin̥halese mode of thought on the Páli and Sanskrit. They knew how many English words and phrases had become almost household words even in the short time the Island had been under English rule, and even such familiar names as those of the months had, even among the ignorant, largely given way to the English names. Therefore it was not a conclusive proof of the descent of the Sin̥halese from the ancient Áryans that there should be grammatical forms and words allied to Sanskrit and Páli. He submitted, therefore, that the linguistic test alone was a very fallacious one.

But the Áryan origin was totally disproved by the whole tradition, history, laws, and customs which distinguish one race from another. Even admitting that Vijaya's followers were Áryans, at least half the blood in the Sin̥halese must be Drávidian, to say nothing about the Tamil conquests and the influx of Tamil coolies. The Áryan caste distinctions were not those which obtained in Ceylon, where they were tribal, similar to those of the Tamils. The existence of polyandry also showed them not to be Áryan.

The land tenure words were either borrowed from the Tamils, in which event the Tamils were the civilisers of the Sin̥halese, or else the Sin̥halese had them in common with the Tamils, Telagus, and Kanarese, which would show their language to be Drávidian. The formation of their sentences was also Drávidian. One could change a whole language by conquest, or by a new religion, bringing in new literature, &c.; but it was impossible to change the method upon which a man thought.

7. Mr. BARBER said they had heard a great deal that night about history and philology, but very little about ethnology, and he would therefore ask permission to read a few

paragraphs bearing on the subject from a work by Professor Huxley of so late a date as 1890.*

8. Mr. D. C. PEDRIS also offered some remarks criticising Mr. Nell's Paper.

9. Dr. VANDORT, on behalf of Mr. Nell, offered an explanation with regard to Mr. Nell's quotation from Dr. Caldwell identifying Ilavers and Tiers as Sinhalese islanders, which had been questioned by Mr. Corea at the previous Meeting. Dr. Vandort waived his right of reply owing to the lateness of the hour.

10. His LORDSHIP THE BISHOP declared the discussion closed.

11. A vote of thanks to the Chair concluded the proceedings.

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* The extract points out the uselessness of placing too great reliance upon philology, and dealing with the ethnology of the Áryans, apparently assigns them an European rather than an Asian habitat, and regards the blondes of North-Western Europe as the purest type of Áryan.

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